

March 1992

The National Locksmith.



Padlock Edition

Click on the article
you wish to read

Contents

Features

26 Padlocks Through The Ages

The history of padlocks dates back thousands of years.

28 Padlocks By American

Take a look at a new series of locks brought to you by American.

30 Padlock Product Review

Here's a section showing a wide variety of the padlocks available.

36 Servicing Lexus

Yes, you can cut keys for the Lexus without an original!

42 Removing Glove Box Plugs

Dale Libby plays with a new toy designed to save time.

56 Safe & Vault Mini-Section

Read all about a number of the safe manufacturers.

66 Car Opening Techniques

Shirl Schamp is at it again...popping open locked cars.

68 Opening A Retail Location

Jack Roberts talks about opening a fixed location.

72 Locksmith To The Rescue!

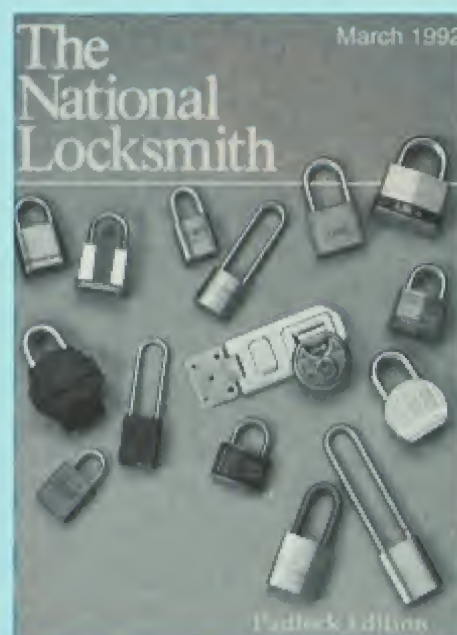
A small child locked in a big safe? Who you gonna call? Safebusters!

75 The Beginner's Corner

Gene Gentry shows you how to manipulate Sentry safes.

85 The Lighter Side

As usual, Sara Probasco gives us a good laugh about locksmithing.



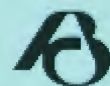
On The Cover

Our Annual Padlock Issue features information on products from the following companies: (in alphabetical order) Abus Lock; Almont Lock; American Lock; CCL Security Products; LSDA; Master Lock; and New Standard Mfg. A product review section begins on page 30 of this issue.

Departments

5 Commentary 6 Letters 11 Technitips 21 Newsmakers 88 Shop Talk

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Commentary

One Day In The Shop...

I am a locksmith. Yes, sir, I can make you a new house key, and yes, I can make you another copy of your car key too.

What's that? Oh, yes I know you can get those keys made at the hardware store. Oh, and you say my prices on locks are a little higher than at the hardware store?

That may be true, sir, but when it comes to your security, is price your only consideration? What do I mean? No problem...let me explain.

When you get a key made at the hardware store, it will be cut on a machine that may not have been adjusted for years. It's doubtful that anyone in that store even knows how to make sure they are cutting your key accurately. Haven't you ever noticed that a high percentage of keys made at hardware stores won't work in the lock? That key won't look like such a bargain if you are locked out at night.

And, yes, my prices on locks might be a bit higher than at the hardware store. But have you noticed that I carry heavier duty locksets, not those inexpensive foreign ones? When I sell you a lock I'm confident that it will stand up to year's of use. And have you seen the wide variety of locks I carry? I stock locks for just about any purpose. Plus, will the hardware store come out and install that lock for you?

Oh? You know of a local hardware store that will now send over a man to put in the lock? Do you suppose he will suggest a high security strike to really improve the effectiveness of that lock? Will the hardware store man conduct a free security survey of your home to help you be sure that your premises are truly safeguarded?

Oh, I see. You just wanted to get the lowest price on a couple of keys and a simple lock. Sure I understand. Pardon me? Yes, I assume the hardware store would still be open at this hour. No problem, I'm sure I'll see you again.

What did I mean by that? Oh well, all I really

meant to say is that someday you're bound to need a real live locksmith. You see, when you lock your keys inside the car, the hardware store won't much be interested in helping you. Yes, sir, I do know the police in this town sometimes open locked cars. And many times I am asked to repair the damage they do to newer cars. The locking system on your new foreign car parked out front is really rather complicated. In fact, the dealer you bought it from often asks me to help him with lock work when a malfunction occurs.

Or perhaps someday you'll find yourself locked out of your house, with the keys inside. I take emergency calls, so even at night I'll be happy to let you back in. Or maybe the lock on your safe will malfunction and you'll need me to open and repair it. We might even run into each other when I'm called out to redo the masterkey system at your office building.

Yes, sir, service with a smile is our motto. I don't just peddle locks. I help my customers secure their homes, their property and even their lives. That's real important to me and it makes me feel good about my job. Well, so long.

What's that? Sure I'll make you those keys after all. Won't take but a minute. Hey, lucky you asked. I forgot, the hardware store doesn't have a machine to make keys for your high security foreign car.

Oh? You want to look at locks too? No problem!



Marc Goldberg
Editor/Publisher

March 1992 5

Letters

Comments, Suggestions and Criticisms

The National Locksmith is interested in your view. We do reserve the right to edit for clarity and length. Please address your comments, praise, or criticism to Editor, The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107. All letters to the editor must be signed.

Hardware Trade Called Locksmithing's Future

Dear Marc:

Recently, Aaron Fish, owner of Ilco Unican and *Locksmith Ledger* magazine, sent a letter to locksmith associations. I have been carefully following the situation about Ilco as have most of my fellow locksmiths. We have been very upset that Ilco and *Locksmith Ledger* would offer free training programs to True Value hardware stores, teaching them to pick locks and to masterkey them.

In his letter, Mr. Fish made the following statement: "The roots of North American locksmithing are firmly planted in the hardware trade; individuals working within the hardware industry today should have every right to learn more about the craft. These very individuals make up the basis for our future locksmiths."

When I read this statement, I was outraged. This is yet another slap in the face to the locksmith, delivered courtesy of Ilco and *Locksmith Ledger*.

The hardware industry is the basis for the future of locksmithing? Certainly, Mr. Fish has demonstrated that this is the group he wishes to be affiliated with...the hardware stores. I say, what about the thousands of present locksmiths who have been buying Ilco products and supporting *Locksmith Ledger*? If our competitors are the "future" of locksmithing...what about us?

The locksmith industry, as we know it today, is made up largely of independent craftsmen. When Mr. Fish succeeds in dragging thousands of chain hardware stores like True Value into our service industry, there may not be much left for the locksmith. We sure can't afford the national advertising these chains do. Heck, we can't even afford to buy Mr. Fish's products as cheaply as the hardware chains can.

I believe that Ilco and *Locksmith Ledger* should simply quit trying to tell us that the hardware chains are our "brothers." If they are our brothers, then they will be like Cain who slew Able. I can live without that kind of brother. ALOA conducted a vote in which 87% of those voting declared that they are opposed to Ilco's training of hardware store chains. Mr. Fish, however, seems determined to ram it down our throats anyway.

That is his right. I just wish he wouldn't try to tell us to like it.

Brad Volpe
Deerfield Beach, FL

New Hampshire Assoc. Helps New Locksmiths

Dear Marc:

I just finished reading the letter to the editor about how "Beginner's" want veterans respect. This is the way most of us started in the locksmith profession. Please ask Mr. Thomas Smith to contact me as soon as possible. The New Hampshire Locksmiths Association is willing to help locksmiths get started. I am the out-going President but know that the association will be very happy to help new locksmiths. I am sure the locksmiths he refers to are not members of The New Hampshire Association.

George Robertie, RR4 Bell Rd.
Plymouth, NH 03264
(603) 536-3071

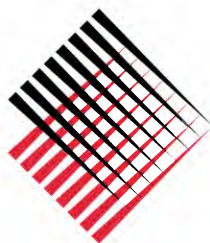
Letter Response Claims Respect Must Be Earned

Dear Marc:

I write in response to the letter to the editor in the December issue of *The National Locksmith* by Thomas L. Smith who wants respect from veteran locksmiths.

I have read this article several times and I must reply by saying I do not think you can gain respect by asking for it, you have to earn it. Mr. Smith did not say if he belongs to ALOA or a local locksmith

Continued on page 8



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Continued from page 6

association. I travel over 100 miles per month just to attend the meetings of our local Locksmith Association which happens to be in Orlando, FL.

Mr. Smith did say he completed a course in basic and advanced locksmithing, however he did not say if he has served as an apprentice to a veteran locksmith in order to advance himself in the trade.

Yes, it takes financing to start your own business, however there have been thousands of men and women who have done just that. The majority of people in business do not know the meaning of a 40 or even an 80 hour week and many of these people also have a hard time matching their "budget needs." Yes, operating your own business and a tight budget seem to go hand in hand.

Mr. Smith states that he does not think full time locksmiths treat beginners "too professionally." He also says he gets better prices from his local hardware store. I wonder if he knows there are many distributors around the country who sell anything you may need to operate a locksmith business.

Mr. Smith also refers to the so-called "True Value" hardware business as his competitor. I have never seen a hardware store yet that I would call a competitor. I would hope that my professional service is far above that of the hardware store.

The so-called "Big Heads" he refers to must work hard for the "almighty" dollar in order to survive in this dog eat dog world and pay their bills.

I would love to know what the other locksmiths in New Hampshire have to say about this. There are always two sides to every story.

W.E. Backus
Florida

Reader Organizes Suit Against Command

Dear Marc:

In response to the letter in the January issue of another Trade magazine entitled "No Payment," I too am a "victim" of Command Locksmith Services. Since it is obvious that there were a number of national franchises that were using Command Locksmith Services, I

suspect that there are hundreds of locksmiths nationwide who have been short changed for their services.

If the other locksmiths are like myself, the amount owed is small enough that conventional collection methods are not cost effective. I would like to take a slightly different approach to solving our combined problem. I would like to develop a list of locksmiths who have accounts with Command Locksmith Services that are more than four months overdue along with the amount of the balance due. With this information the scope of the victimization will be measurable. Hopefully the magnitude of this "fraud" will warrant the involvement of the Federal States Attorney's office in the form of a class action suit. Since the customers were from a nationwide group, with enough information, it is my opinion that this activity by Command Locksmith Services qualifies as interstate commerce, and therefore is in the jurisdiction of the Federal Legal System.

If you would like to provide the

Continued on page 96



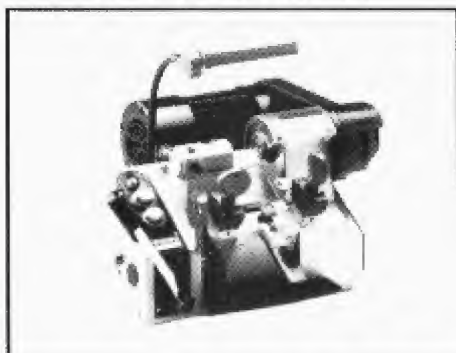
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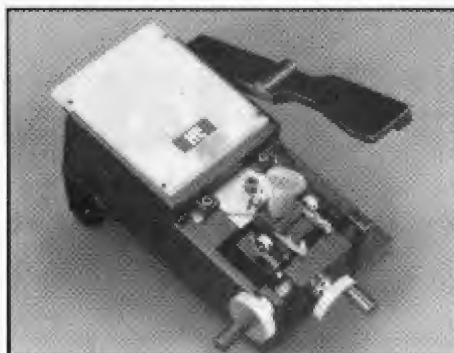
Silca's Bravo USA



First Prize

Locksmith designed, the Silca Bravo USA is a quality semi-automatic duplicator. Four-way jaws hold even the smallest keys as this. One of the most accurate key machines on the market.

HPC's Punch Machine™



Second Prize

The Punch Machine™ (1200PCH) is HPC's newest addition to the 1200 series key machines. It works on the same principle as the 1200CM, making it quite versatile. It is also very accurate and completely portable.

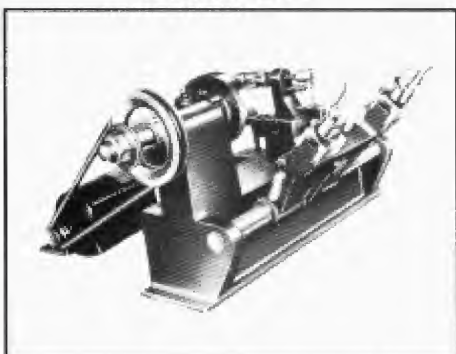
ESP 5000



Third Prize

The model 5000 key machine can be used for manual cutting or, with the flip of a switch, it will cut keys automatically. It is designed to accommodate large head keys such as hotel and foreign auto blanks.

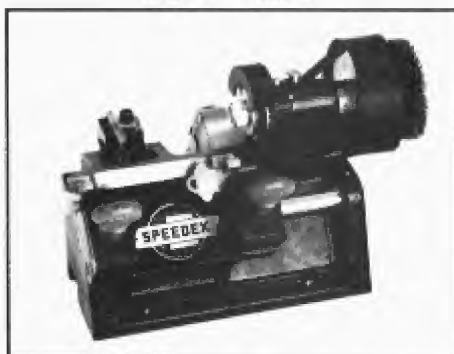
Belsaw 200



Fourth Prize

Duplicate, cut by code, cut flat steel keys. Complete machine with motor, three cutters, guides, and instructions. Built-in micrometer.

HPC 9120



Fifth Prize

HPC's most compact key cutting machine features reversible jaws. Double-sided copy dog cuts flat steel and safety deposit keys and has softy brush. Excellent versatile machine.

\$100 Cash & Flat Rate Manual



Sixth Prize

\$100.00 in cash will brighten your day! So will the *Flat Rate Manual for Locksmiths*. The manual will help you price your services for profit. You won't ever have to guess how to price again.

Code Books From The National Locksmith

General Code Book Set (NGCB)



Seventh Prize

These three books contain 450,000 codes covering domestic lock and automobile codes.

Padlock Code Book Set (NPCB)



Eighth Prize

These three volumes offer 462,000 covering Dudley, American (Junkunc), Master and Yale.

Foreign Code Book Set (NFCB)



Ninth Prize

This two volume set holds 432,000 codes for the complete variety of foreign codes, from Alpha Romeo to Yugo.

Technitips

Helpful Hints from Fellow Locksmiths



Send me your Technitips. Who knows, you may be our next winner! c/o The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107.

by Robert Sieveking

Congratulations to all those who find their Technitips printed here this month. There are some pretty good ideas and solutions to new problems this month. What do you think of all the new prizes for '92? We have loads of monthly prizes and more opportunities to win this year. Why not give it a try? Writing a Technitip is no harder than writing a letter. Take the time to share your best ideas and newest discoveries with the trade. Write a Technitip and get it in the mail today.

These prizes are yours, if you take the time to claim them. It is true, that all things come to he who waits, but nothing ever came to the man that simply waited. While you're waiting, you have to do a little hustling.

During one of those rainy stormy days of March, you could be cleaning up the shop, or "heaven forbid" getting rid of some of that junk that's been cluttering up the floor under your work bench. If you can clear off a little space on the desk, and take a few minutes to write up a Technitip, you might be receiving an Easy-Pull GM wheel

puller this time next month, or how about an All-Lock V.A.T.S. decoder or an HPC Pick Pistol. How many locksmiths would turn down a chance at a set of ESP lock picks, or 100 Silca rubber head key blanks?

Thank you for your help in making Technitips the most read and best supported locksmith technical column in the industry, bar none.

These Prizes Awarded Each Month!

**All-Lock A-7000 VATS Decoder
HPC Pistolpick
Silca Rubberhead Keyblanks (100 blanks)
ESP PR-13 Professional Lock Pick Set
Sieveking Products EZ-Pull**

Submit your tip and win!

How To Enter

All you need to do to enter is submit a tip, covering any aspect of locksmithing to The National Locksmith. Certainly, you have a favorite way of doing things that you'd like to share with other locksmiths. Why not write it down and submit it to: Robert Sieveking, Technitips' Editor, The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107.

Tips submitted to other industry publications will **not be eligible!** So get busy and send in your tips today. You may win cash merchandise, or even one of many key machines or code book sets! At the end of the year, we choose the winners of the listed prizes.

Last year dozens of people walked off with money and prizes. Wouldn't you like to be one of the prize winners for 1992? Enter today! It's a lot easier than you think!

Every Tip Wins!

Every tip published wins you \$25.00 in Locksmith Bucks! Use this spendable cash toward the purchase of any books or merchandise from *The National Locksmith*. You also receive a bonded Locksmith Bumper Sticker and decal. Plus you are now eligible for the really big prizes!

Best Tip of the Month Prizes!

Best tip of the month wins \$50.00 in cash as well as \$35.00 in Locksmith Bucks! Plus you will receive a Bonded Locksmith Bumper Sticker, decal and a Locksmith Cap.

Plus these prizes will be awarded each month!

**All-Lock A-7000 VATS Decoder
HPC Pistol Pick, pick gun
Box of 100 Silca foreign auto rubberhead keys
ESP PR-13 Professional Lock Pick Set
Sieveking Products EZ-Pull**

March's Best Tip

This Technitip was born a number of years ago, out of necessity. I haven't told anyone, because this method is so simple anyone could use it.

I have a large shop, constructed of concrete block, with glass block windows. The area is relatively high crime, so I have barricaded the door, and use only the overhead garage door as entry. One day, I went to open the door, and the key

turned but the handle would not unlock. Right away, I knew that the rim cylinder actuator had become disconnected and was not retracting the bolt, to free the handle. After a little thought, and some estimating, I decided on a plan of action. I drilled a small hole 1-1/2" down from the rim cylinder and 1/2" to the left, as you see in illustration one. We are aiming for the edge of the lock bolt, where the notched cam prevents the handle from being

Garage door Lock-out?

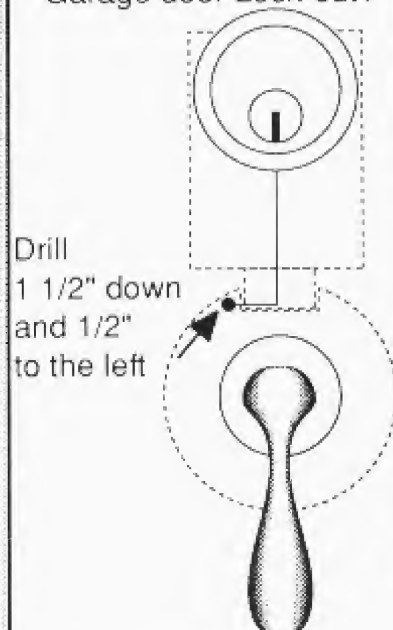


Illustration 1

turned. Insert a small screwdriver into the hole, and push firmly. You are pushing the cam back, to bypass the lock bolt as the handle is turned in the opening direction.

We could have drilled to hit the lock bolt, but if the lock case is firmly screwed to the door, we might damage the lock case, so that it would need to be replaced. The hole, if it is small, can be repaired with a round head wood screw. If you drilled a larger hole, a wood plug and a little paint will make a better repair.

Cecil Scholze
Wisconsin

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National Auto Lock Service, Inc. offers a wide range of equipment and services for the Automotive Locksmith. From tools and hard to find key blanks to transponder programming, we can take the mystery out of car service. We accept credit card orders, and can ship COD. Contact us for the latest in automotive technology.

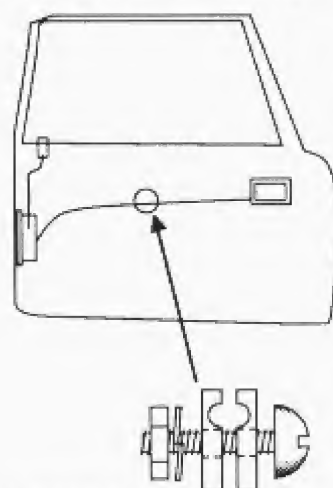
All-Lock VATS Decoder Winner

This Technitip concerns a problem I had with a Hyundai auto. It seems that the latch handle linkage will not actuate the latch to release the door. The door can be opened from the outside, but the inside handle will not release the latch. The problem is the plastic latch rod guide clip. If this clip is broken, the latch linkage will sag and bend instead of pulling hard enough to release the latch. The plastic clip is definitely not repairable, and nearly impossible to find, so I made a guide as you see in illustration two. Two washers are filed and formed to make a sliding fit over the latch rod. The washers are held to the door with a #10-32 or 1/4"-20 stove bolt. Use the same hole that

Continued on page 14

Continued from page 12

Hyundai Latch Problems?



Lock linkage support
restores proper operation

Illustration 2

was used by the plastic clip you are replacing. Carefully position the guide, so it will not bind the rod, and tighten it in place. A lock washer will prevent it from loosening on the door. Use a short screw, so it does not interfere with the door panel or window operation. After seeing how well this Tip works, I'm sure that the same principal can be used on other similar linkage arrangements.

F.E. Huey
California

Silca Keyblanks Winner

This is a quick Tip for those that find themselves making a key for a GM telescope steering column, and suddenly realize that the new telescope shaft locking screw is not the same thread as the older models. I found this problem while rekeying a 1990 Cadillac. The solution to the problem was quite simple. Cut a 2-1/2" length of 3/16" bolt, and drop it down the center of the telescope section of the steering shaft. Install your regular lock plate compressor over this, and tighten it in place. The piece of bolt will force the locking woodruff key, at the bottom of the telescope shaft, to lock the telescope section in place. Remove the lock plate as usual. Be careful to note the position of the lock plate and horse shoe clip as you remove them. They can only be installed one way, so be careful. I'm sure this Tip will be a real help when you run across this problem.

Dale Jenkins
Missouri

ESP Pickset Winner

When installing a drive-in, or round face latch, use a 3/4" deep socket over the latch to drive on. Place the socket over the latch, and hammer the socket. This will avoid any damage to the latch, and prevent hammer marks in the finish of the door.

Here is a second Tip, that will help you if your are called to "plug" a hole in a hollow steel door. The easiest method of plugging a hole, is with a filler plate like the one shown in illustration three. The disadvantage of this filler plate, is that it can sometimes slip and slide around on the door, especially with hollow

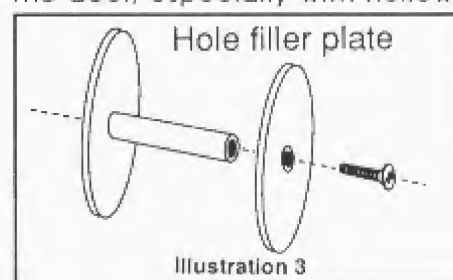


Illustration 3

doors. My Tip is to install a used Kwikset deadbolt in the edge bored hole of the door. Pass the filler plate connecting rod through the actuator hole in the bolt, and secure

Continued on page 16



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Continued from page 14

the filler plate with the screw provided. This will positively prevent the filler plate from shifting or being slid in the hole. The mortised hole in the edge of the door is filled by the deadbolt as an added convenience.

Juanita Ramsey
Texas

HPC Pistolpick Winner

This Technitip concerns the location of key codes on Ford model U-Haul trucks. The U-Haul people usually make their own keys, because the central office has Curtis clippers specifically for this purpose. I guess they have problems using the code books, because the codes are "direct digit," requiring no conversion. The five digit number is located on the windshield frame, on the passenger side of the vehicle. This is a great Tip. If you get a chance to make a key for one of these vehicles.

Paul M. Coleman
Colorado

Sieveking E-Z Pull Winner

If you have ever had a customer that owns an Amsec Star B-C round

door lift out safe, maybe this Technitip will help you help them.

In commercial use, when this safe is opened, the head is usually set down next to the cylinder, on the concrete floor. Constant use, and a little abuse, can cause a number of problems. The jarring causes the lock cover screws to loosen, which can cause a relocker type lockout, and the cover plate can become distorted and damaged, requiring premature repair.

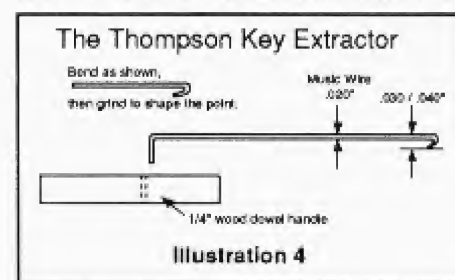
A simple modification to the safe head can prevent all these problems, and even save wear and tear on the floor surrounding the safe. Simply purchase three rubber feet, the type with the screw in the center, and attach them to the bottom of the safe head, so that the head makes a "soft landing" when it is set on the concrete floor. Space the rubber feet evenly around the bottom of the head, about 3/4" in from the edge. Be careful when drilling and tapping the holes for the attachment screws. You don't want to drill through one of the lock bolts.

Mike Sullivan
Florida

This Technitip concerns a hand

made broken key extractor. Of all the broken key extractors I have used, I find that the ones I make work better, last longer, and are generally superior to any I can purchase.

To make the "Thompson superior key extractor," begin with a 6 inch piece of .020" piano wire (music wire or spring wire.) Bend the working end to a sharp 135 degree angle, as you see in illustration four, then shape the



tip with a grinder to form a thin short pointed barb. Use a bench grinder or hand grinder to shape the point, but be careful not to overheat the extractor on the grinder, or you will draw the temper out of the wire, and leave the hook soft. Never use a file to shape the tip. The music wire is extremely hard, and will damage the teeth of your file.

To complete the tool, I used a

Continued on page 18



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Continued from page 16

piece of 1/4" dowel to make a handle. Drill a tiny hole through the dowel, and bend the music wire as you see in illustration three. Assemble the extractor to the handle with a little epoxy, so as not to loosen. You may want to wrap the handle with tape, or heat shrink tubing.

This extractor slips easily alongside the broken key, as you use a flat pick to depress the wafers or pins in front of the broken piece. It works almost every time. These hooks are extremely strong, for their small diameter.

W.W. Thompson
Georgia

I used to have a difficult time trying to impression locks that had been lubricated or were sticky from dirt or gunk. That was true until I discovered that aerosol TV tuner cleaner or contact cleaner would do a fantastic job of removing the oil and grease from the cylinder. The spray can has a handy tube, that allows me to direct the spray into the keyway, to dissolve and flush away the gunk and grease of years of lubrication. The spray is safe for all plastics, but it is still a good idea to keep it off of the painted surfaces as much as possible. The graphite oil,

that is flushed out of the cylinder, can stain the surface of a painted door, so use a shop towel to protect the area around the lock cylinder, and catch any solvent that drips from the cylinder while you are washing it out.

Trichlorethelene is the primary ingredient in most of these contact solvents. Use it only with adequate ventilation. For best results, use a spray that does not contain a "lubricant." You want to leave the cylinder "dry."

Doug Westbrook
Iowa

Extracting broken keys is a regular chore with me, but I was constantly having problems keeping those tiny spiral key extractors chucked up in the tool provided for them.

The tool was also too large to carry in my pick case, so I came up

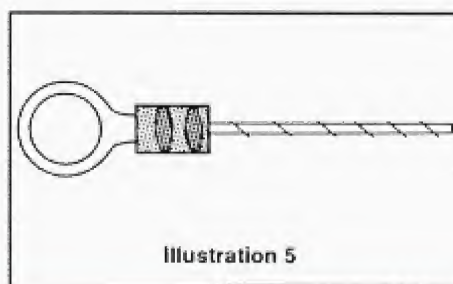


Illustration 5

with a solution that was both secure and no larger than a regular pick. Simply slip the extractor into a round lug solderless terminal and crimp it tight, as you see in illustration five. It will never loosen, will provide a good handle, and will stand twisting, as is necessary with this type of extractor. If you use this type of extractor on your bench, you can even use the ring to keep it handy by hanging it on your key board.

Larry Wright
South Carolina

I recently had the opportunity to open one of the new Fire King lateral file cabinets. They use a new style of high security key, which you may recognize as Tubar. The Tubar lock is a tubular type lock, which incorporates two sidebars. The key is a special flat type key with plunge milling from the end. I have not seen any blanks for this lock, as I am sure they are a controlled item. You can forget picking these jewels. You can also forget making or getting a key by code. If the key is inside the cabinet, this is the procedure for opening the cabinet to retrieve the keys. (See illustration 6.)

To open this file cabinet, you must

Continued on page 96



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Newsmakers

New Products and Industry News

The Business of Locksmithing

Sara Probasco is not all laughs! She is serious about "The Business of Locksmithing."

You should be, too!

Did you know that 70% of all businesses will fail within ten years? Nowadays, expert knowledge, alone, is no guarantee of success. You must be able to run an efficient business operation and make a reasonable profit, without pricing yourself out of the market.

No one is born with these skills. They must be learned. And the best way to learn is from someone who has already been there! That's why Sara Probasco is offering an eight-hour seminar on "The Business of Locksmithing," to share with you her own experiences and help you run your business more efficiently and profitably.

With nearly thirty years experience as a successful entrepreneur, coupled with a background of teaching, lecturing, and public speaking, Sara Probasco can guide you down the road to success.

You have probably enjoyed reading Sara's humorous articles, through the years. In the same light-hearted manner, she covers such diverse topics as simple record-keeping, advertising, customer relations, psychology of selling, inventory management, collections,

store layout, and stress management.

Working in an informal format, she encourages open participation and includes time for questions, answers, and group discussion.

For booking and scheduling information or to inquire about fees, contact this magazine or circle the Rapid Reply number on the Rapid Reply card. Book Sara Probasco's "The Business of Locksmithing" for your organization today.

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Treskat Offers Free Locksmith Software

Treskat USA offers free demo disks on several of their best selling locksmith programs. These demos include CodeMaster the computerized code book, Perfect Master IV for masterkeying, and Keyman the key blank cross reference and management software.



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M.K. Morse Lock's Do-It-Yourself Kit

The Lock installation kit includes the two most popular (2-1/8" and 1") diameters Real McCoy® hole saws (with a patented, permanently attached arbor) for accurate lock installation in wood or metal doors. The bi-metal hole saw offers a variable pitch, positive rake design for smooth holes and reduced risk of door damage. The standard pack contains two kits.

The M.K. Morse Company manufactures a broad range of cutting tools, including bandsaw blades, hacksaw blades, hole saws, reciprocating and jig/sabre blades and abrasive wheels.



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Jet Releases Catalog 191 Supplement

Jet Hardware has just released their new eight page supplement to their Catalog No. 191. The catalog compiles 78 new key blanks that were added since Catalog No. 191 was released early last year. A complete universal cross-reference between Jet and other manufacturers is included in this publication.

In addition, Jet has just announced five more new blanks added to their line. These keys consist of TR46 and TR47 for Toyota, V37 for Volkswagen, and AR-ER master blank for Arrow sectional keyways. In their continuing program to bring to the market the most complete line of safe deposit keys, Release No. 12 includes their DIE-2 to

fit Diebold and York safes. Jet is continuing a unique service in neatly incising an identification number on all of their safe deposit keys.

Copies of both the Supplement to Catalog 191 and supplement No. 12 dated January 15, 1992 are available from your distributors or Jet Hardware.

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Medeco's Patriot Defends Customer Security

Medeco Security Locks, Inc., has introduced a new high-security lock program with its Patriot Tour '92.

This program gives locksmiths the advantage of a unique keyway, a simple yet tamper-resistant method of key control and key blank



accountability, and a fast, efficient way to service customers.

The Patriot lock program uses a customer key control card to obtain key duplicates. The locksmith, by running the card through a data machine which is connected by modem to the Medeco Key Control Department, can verify and approve customer requests. Once a customer's data has been checked, the location of the locksmith, the number of key duplicates requested, and the data are all instantly recorded at Medeco. Key control information is just as easily retrieved, and Medeco customers can thus keep track of keys without the worry of bookkeeping.

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Gil-Ray Tools Freezes Cutter Sharpening Rates

"In an effort to help jump-start the economy, and help our locksmith customers remain profitable during these recessionary times, Gil-Ray Tools Inc. of Bay City, Michigan has frozen their 1990 sharpening prices for dull key machine cutter wheels," announced David J. Deuel, president of Gil-Ray Tools. "We want to do everything that we can to help our clients," he added.

Gil-Ray Tools specializes in sharpening dull key machine cutters. Their current price sheet went into effect in October 1990. This is their 47th year in the cutter sharpening business.

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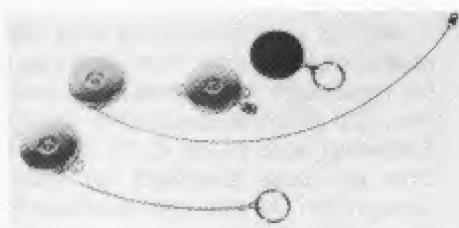
West Coast Chain Adds Key-Bak

West Coast Chain, manufacturer of the Key-Bak and Mini-Bak key chain retractors announces the introduction of a long-reach retractor. Made in the U.S.A., it features a 48" long stainless steel cable which has a breaking strength



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of over 95 lbs. and is of 7x7 strand nylon jacketed construction for maximum strength and flexibility. The spring retractor mechanism has been tested to over 100,000 cycles without failure. This smooth running retractor is enclosed in a rugged steel case only 2" in diameter and weighs less than 2-1/2 oz. This makes the Long-Reach Key-Bak particularly unique by doubling the extension length of other similar products with the same diameter and thickness.

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Buddy's New P.O.P. Helps Sell Wallsafes

Buddy Products of Chicago has developed a striking new 3-dimensional point-of-purchase display for their popular Wallsafe.

Loaded with special attention-getting features, this heavy duty freestanding display showcases the actual Wallsafe so customers can try the combination lock, open the piano hinged door and look inside the storage compartment.

The top of the display is done in full color, showing the Wallsafe's important selling points, and it features a convenient "Take One" tear-off pad with "Easy Installation" instructions.

Each display measures 18 1/4"W x 10"D x 20"H and is shipped with every carton of four Wallsafes (stock #3101.)



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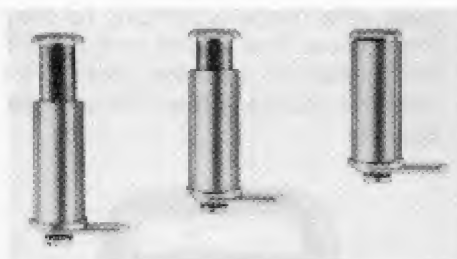
Kenstan Lock's XL Cam Lock

Kenstan Lock has developed the K18XL Extension Cam Lock series in response to customer demand for cam locks to secure cabinet doors thicker than 1". The K18XL is available in both economical flat key disc tumblers and top security Keymatic pin tumbler designs.

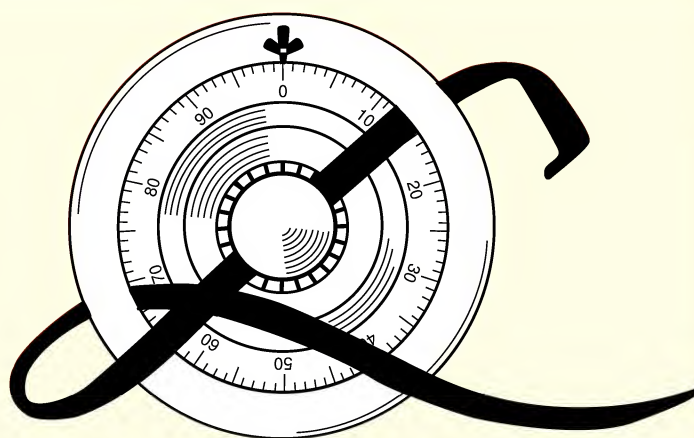
The K18XL is designed with adjustable extension bolts so there is a solid and tight fitting lock to secure any cabinet door up to 3" thick.

Installation of the K18XL is easy.

After drilling a pilot hole, you only need to drill two holes for the XL. Insert the lock, secure it, add extension bolts, and tighten.



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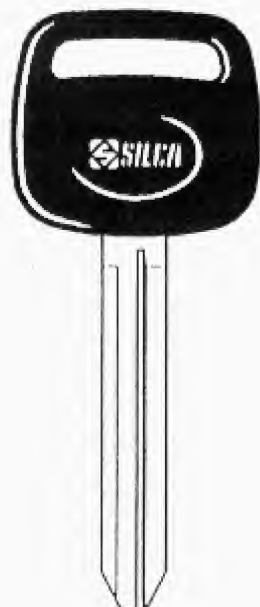


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Silca Introduces New Toyota Keys

Silca Keys U.S.A., Inc. is proud to announce the addition of Toyota keys and more additions to their Pronto Line. The TOY43 and TOY43P are primary keys for the new Camry and the TOY44 is the Camry valet key.



The newer long Ford ignition key works for both the H54 and H60. In our standard Silca line the FO18 has been discontinued and is substituted by the FO26. In the Silca Image Line, the 00116 is now produced in the longer version only.

Another important price change is effective immediately on the CH9T tubular key which was incorrectly priced on our last price list.

Silca is also now equipped to offer their Image Line keys in boxes of 250.

Also, Silca announces an addition to their staff, Kurt Liptak as Director of Services.

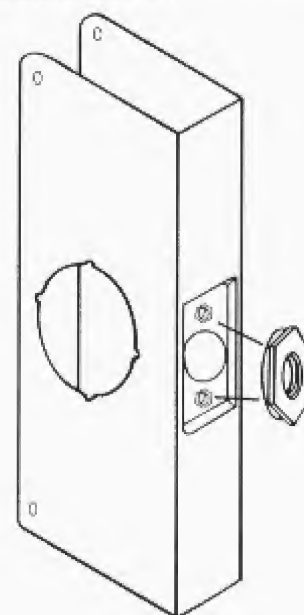
Their 1992 "Car Book" showing key usage by car model is in print now and will be available soon.

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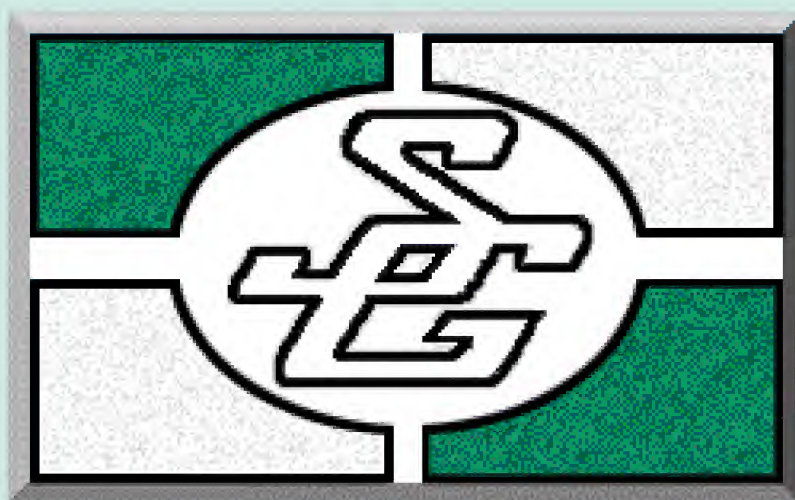
Don-Jo Expands Wrap-Around Category

Don-Jo Mfg. has recently announced the expansion of its classic wrap-around category to include a US10B finish. This is a solid bronze based material that is oil rubbed to bring it to a true architectural grade finish.

All 10B wrap-arounds come with built-in stainless steel threaded inserts for maximum latch holding power. The 10B finish is available on the following sizes (1, 2, 4, 61, 81, 261) and is visual packed for quick recognition. All sizes are available for immediate delivery.



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Lock History...

Padlocks Through The Ages

"Some padlocks contained built-in traps that closed with agonizing force on the fingers of a thief."

Considering the history of locks and locksmithing, protection has always been the constant that ties the past with the present. For centuries, locksmiths have attempted to devise a maximum-security padlock. In fact, the challenge to "build a better lock" to protect private property against thieves or vandals is endless.

Historians report of a lock found in the ruins of an Assyrian palace more than 400 years ago. This ancient device used roughly the same principle as today's pintumbler padlocks, but the concept was apparently lost or abandoned for centuries.

The Greeks invented crude key locks, but the keys measured up to three feet in length and were difficult to carry. Early Roman locks were not directly attached to the door. They were removable, like modern padlocks, and ornately designed in the shapes of animals, birds, fish and horned beasts.

Keyless or "letter locks" were developed by the Chinese. These locks were the ancestors of modern combination locks and featured several rings around the lock's barrel. Letters, numbers or symbols were featured on each ring. When the rings were moved to a pre-arranged alignment, the lock would open.

Indian civilization produced the famous Hindu "puzzle" locks, built in the form of a bird revered for its cunning. These devices were called puzzle locks because there was no obvious keyhole.

With the Hindu lock, the keyhole is cleverly concealed under one of the wings. Other puzzle locks were opened by pressing on certain parts of the lock case; often several parts had to be pressed at once or in a pre-arranged rotation.

While each of those early locks provided a level of protection, the actual security value was limited. However, there was a growing need



for locks between the 15th and 18th centuries—especially in the European kingdoms.

When European royalty still held power, locksmithing was the rage for nobility. Talented artists and sculptors created decorative lock plates and hinges to secure their dwellings against thievery. King Louis XVI of France occupied many hours in his palace workshop designing and building locks.

In contrast to today's emphasis on utility, these locks were designed in beautiful lace-like patterns.

Early locksmiths also developed ingenious, but punishing safeguards.

Some padlocks contained built-in spring traps that closed with agonizing force around the fingers of a thief. One unique lock stamped a branding symbol into a thief's head to mark him for easy identification at a later date. In addition, there were locks which exploded small bombs, released poisonous gases or sounded shrill alarms.

The term "padlock" has two possible meanings. In the Middle English language, "padlokke" meant portable lock, based on the two words "pad" or basket, and "lokke" or a metal device to complete a circle.

Another variation of the word "padlock" was defined in the Dark Ages, when highway robbers or robbers on foot were known as "pads." The "lock" or device used to keep out a "pad" became known as a padlock.

Despite the clever, or even deadly security precautions, thieves or burglars held the upper hand. Padlocks were no match for a strong arm wielding a heavy hammer.

Seventy years ago, a Milwaukee locksmith named Harry E. Soref recognized the need for strong, durable security, and in 1921 invented the "Master Laminated Padlock."

Soref designed the padlock's outer shell with multiple layers of tough steel to protect the delicate locking mechanism. The layered steel plates were bonded, one atop another, to form a virtually impenetrable shield.

The laminated padlock thus revolutionized the lock industry, offering maximum protection at a reasonable price.

Since the introduction of the laminated padlock 70 years ago, Master Lock Company has grown dramatically. The product line has been greatly expanded; national advertising continues to strengthen Master Lock brand awareness, and promotional programs have become more sophisticated. §

Trade Talk...

Padlocks By American

"American Lock recently introduced the 10 through 50 Series padlocks which fill a market need."

American Lock Company takes pride in the many new products they have introduced into the padlock market; the same pride John Junkunc had when he invented the first keyless (combination) padlock shortly after his arrival in the United States in 1912.

Over the years American Lock Company has had many new products introduced into the padlock market. Because of the aggressive padlock market, American Lock recently introduced the 10 through 50 Series padlocks which fill the need for superior performance locks at a modest price.

Series 10 and 30 are available in 1-3/4" and 1-1/2" wide body. This Series features a solid aluminum body with case hardened corrosion resistant plated steel shackle and double ball locking mechanism. This product series enhances American Lock Company's durable "All Purpose" product category.

Series 20 and 40 are available in 1-3/4" and 1-1/2" wide body. This Series features a solid brass body with case hardened corrosion resistant plated steel shackle and double ball locking mechanism. This product series is positioned in the Weatherbuilt category of American Lock padlocks which is ideal for outdoor applications, harsh weather, and environmental conditions.

Series 50 is available in a 2" wide body. This Series features a solid steel body with case hardened corrosion resistant plated steel shackle and double ball locking mechanism. This Series offers versatility and protective strength and complements the American Lock Company Professional Series line.

All American Lock Company's 10 through 50 Series boxed padlocks may be ordered with American Lock's keyed alike and master keyed systems. Also offered is Master Lock® Company's 1K keyway to service existing established systems. Series 10 through



American's 10 and 30 series.



The American Lock 20 and 40 series.

50 is available boxed or cased.

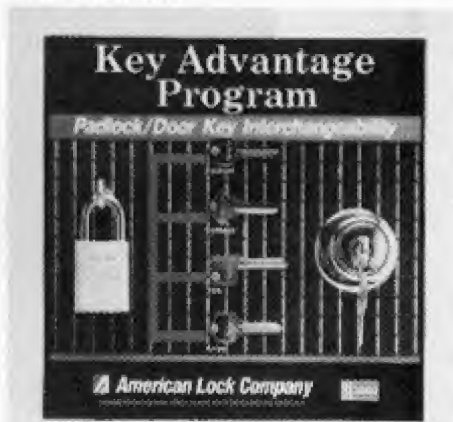
Most recently introduced in the American Lock Company product line is the Key Advantage Program™. This program offers the convenience of Model #3600 and #3700 padlocks keyed to one of four popular door keyways; Kwikset®, Schlage®, Arrow, or Yale.

The Key Advantage™ Series is available in 1-3/4" and 2" wide body padlocks. This series features a solid one-piece extruded brass body with hardened alloy steel chrome plated shackle and double ball locking mechanism.

With this program, consumers and



The model 50.



The Key Advantage display board.

businesses alike can eliminate the extra keys needed for securing gates, storage sheds, bikes, etc. Easy repinning provides the proper keying service to fit these popular door locks and the convenience of only one key for all your security needs. Servicing requirements are clearly explained on the package.

American Lock Company has pride in the American made products produced here, as well as pride in being a manufacturer of padlocks for over 75 years.

For more information contact: American Lock Co., 3400 W. Exchange Rd., Crete, IL 60417, (708) 534-2000. §



Padlock

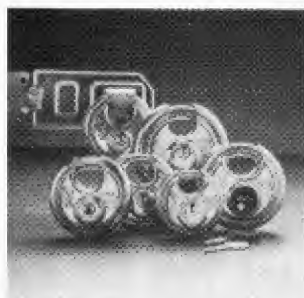
Review

There are many padlocks available in today's market. Therefore, there is certainly a product available to fit any purpose and price range. By being aware of the range of padlocks offered to you, you can best help your customer choose the right product. Here is a good sampling of padlocks. Although there isn't space to show each lock made, this is a good overview. Feel free to circle the numbers of interesting products on the Rapid Reply card. You'll receive information from the manufacturer.

Abus' Original Diskus Padlocks

Abus Lock Company offers the Abus Original Diskus Padlock line which consists of six unique models and sizes. The features of this padlock line include a stainless steel body, hardened steel shackle that is highly pick resistant in design, minimizing attacks by bolt cutters, saws, files, etc. Each padlock is laser welded for superior strength and carries a lifetime warranty.

Abus also manufactures two sizes of hasps and staples that are designed specifically to provide maximum security when used in conjunction with the Diskus Padlock.



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Almont's Two Rekey Padlocks

The Almont Lock Company has two different sizes of padlock bodies: 1-1/2" and 1-3/4" body. The padlocks have various length shackles made of either hardened steel or solid brass.

They offer several different keyways including Schlage, Yale, Kwikset, Weiser, and Sargent "S." Also planned for production later this year the Sargent "LA" keyway.

The rekeyable design facilitates easy keying of the lock into other security devices which their customer may already use.



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Alten Corporation Padlock Security

Loss Master™ from Alten Corporation, is designed for roll-up type doors using the Todco/Global style latches. Commonly used on light trucking operation and inner city delivery trucks, Loss Master can be used on most swing-out type doors by using the existing hardware if a 2" padlock with a 5/16" shank is used.

Loss Master does not require installation and can easily travel with the driver instead of the truck. It deters theft and tampering by offering solid lock protection.



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American Lock's Shrouded Shackle

American Lock Company's new Model #5300 and #5360 padlocks offer maximum security with a protective shroud to prevent shackle cutting. Made of solid steel, these two new locks (1-3/4" and 2" wide) feature American Lock Company's famous double ball locking mechanism, recommended by the National Crime Prevention Institute.

Rekeyable and interchangeable cylinders add to the product's serviceability.

Available boxed or carded (1-3/4" only - Model #5300CC), these new padlocks enhance American Lock Company's leading edge in the solid steel market.



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Continued from page 30

Arkon Resources Plastic Key Lock

Card Lock™, new from Arkon Resources, is an innovative padlock that utilizes a credit card-size plastic Card Key in place of a traditional metal key.

Anyone who has owned a standard padlock knows that metal keys are easy to lose, and lock combinations are just as easy to forget. Card Lock, however, avoids these pitfalls with its ingenious Card Key which can be conveniently carried in a wallet or pocket. Simply insert the Card Key into the Card Lock, and the lock is opened.



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CCL's 400 Series Sesame Padlocks

CCL Security Products' 400 series Sesamee Keyless Padlocks are ideal for outdoor and marine use, where complete security and convenience is required.

Padlocks feature solid brass bodies with all brass internal mechanisms and are available with chrome plated, hardened steel shackles that resist sawing, or brass shackles that are non-corrosive, both with 1" or 2 1/4" clearances. The padlock is also available with a chrome plated brass body and brass shackle.



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Falcon's Heavy Duty Padlock

Falcon Lock offers a heavy duty, 2" solid brass padlock with key retaining feature in both standard cylinder and interchangeable core types, available with 1", 2" or 6" shackle. The standard type accepts 5, 6 or 7 pin cylinders without modification. The I/C type accepts 6 or 7 pin interchangeable cores.

This padlock meets or exceeds the requirements of Federal Specification FF-P-101c-EPC 2".



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LSDA's Laminated Steel Padlocks

LSDA's laminated steel padlocks, sold only through locksmith dealers, feature chrome plated hardened steel shackles, double ball locking security, and pin tumbler cylinders with solid brass keyways.

These laminated padlocks come in four different case widths ranging from 1-1/4" to 2". Each lock is individually boxed in attractive packaging designed for easy keying identification.

The zinc plated galvanized laminates are individually rust-proofed and rivetted together for a longer life.



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Master Padlock Enhances Security

The New No. 31 from Master Lock is an affordable padlock that features a 1-1/2" wide body, with the improved security of five-pin-tumbler cylinders. Ideal for applications requiring numerous padlocks and keys, such as fleets, commercial/industrial facilities and safety lockouts.

The new No. 31 features: a five-pin-tumbler cylinder with over 10,000 possible key codes, 1-1/2" wide laminated steel padlock body, case-hardened steel shackle, and extra-length shackle, colored bumper option and full keying availability.



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New Standard Expands Line

The New Standard Manufacturing co., line has expanded to offer a wide selection of large section rekeyable padlocks. Models in 1-3/4" and 2" bodies are available which accept the following widely used cylinder systems: Schlage knob type cylinders, Sargent & Arrow knob type cylinders, Russwin/Corbin knob type cylinders, Yale knob type cylinders, Best type I.C. cylinders, Russwin/Corbin I.C. cylinders and Medeco I.C. cylinders.

Of particular interest is the new NKR-CV, dual function padlock, available in all models.



For FREE Information
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Abus Introduces "All-Weather" Locks

Abus Lock Company recently introduced the new 84 Series "Tough Security" Line of "All-Weather" padlocks. These attractive padlocks are built to withstand the most adverse weather conditions while providing security you can depend on.

The body and double-locking shackle are solid brass, and feature a rugged, protective black vinyl sheath over the entire body. Bronze springs in cylinder assure rust-free operation. All locks carry a lifetime warranty.



For FREE Information
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Almont Lock Re-Keyable Padlocks

Almont Lock Company's padlock design allows for fast and easy repinning of the padlocks. With their newly re-designed wire retaining tool it's easier to rekey their padlocks. For master keying or for keying into an existing key system, simply notch a key and insert the wire to change pins or shackles.

Another plus is the lock is built with a body made from solid bar brass and the shackles made either of hardened steel or solid brass. The padlock is a key retaining type for greater security.



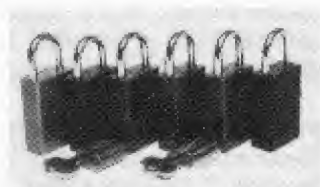
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Continued from page 32

Interchangeable Cores By American

American Lock Company is pleased to announce an addition to its safety lock-out system—interchangeable core padlocks (Model #3105, #3106, and #3107). These padlocks provide the ability for American Lock Company's color-coded padlocks to accept Best Lock™, Arrow, Falcon®, Eagle and Lockwood cylinders.

Available in six colors (red, blue, green, gold, duranodic, and black), these 1-1/2" wide aluminum body padlocks provide the versatility to adapt to all your Safety Lock-Out needs. These padlocks are also available in three shackle lengths.



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CCL "Sesamee" Keyless Padlocks

CCL Security Products offers a complete versatile line of keyless security padlocks. The Sesamee series features up to 10,000 possible combinations which can be easily set and reset.

Sesamee padlocks are manufactured with solid brass internal mechanisms and solid brass or durable black epoxy finished pressure cast bodies. The hardened steel or solid brass shackle have clearance of 11/16", 1" or 2-1/4".



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LSDA's Solid Brass Padlocks

LSDA's solid brass padlocks are sold only through locksmith dealers. The pin tumbler cylinders with solid brass keyways and solid brass bodies make these padlocks highly corrosion and rust resistant. The double locking hardened steel shackles are chrome plated and are available in standard size or the longer 2-1/2" size.

LSDA brass padlocks come in five case widths ranging from 3/4" to 2". Each lock is individually boxed in attractive packaging designed for easy keying identification and comes with two nickel plated keys.

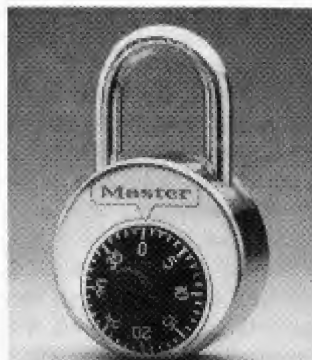


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Master's High- Security Locks

The 2000 Series combination padlocks from Master Lock are specially designed to secure employee lockers, storage area doors, gate entrances, truck doors and other industrial applications.

The 2000 Series more than doubles conventional combination lock security, based on pull, wedge and shear test. And the patented three-steel-ball deadbolt locking mechanism secures the shackle against prying, and guards against shimmying or rapping.



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by Tom Seroogy

Servicing Lexus

"Yes, Lexus keys can be made without an existing key and without knowing the cuts."

One of the necessities of the trade seems to be having the ability to open and/or make keys for anything, especially the unexpected. NOW! Vehicles using high security keys and locking systems, for example, sometimes require immediate action. Shortly before writing this article, I was called upon to make keys for two 1992 Cadillacs with airbags and VATS, open one 1991 Lexus 400, one 1992 LS400, one 1992 SC400; rekey a 1990 Lexus ES250, and make keys for a 1992 ES300. And all this work was referred to me by the dealers.

With the ability to get key numbers and keys from the manufacturer why did the dealers go to a locksmith? They needed it done NOW! Was I prepared? Yes! The odds may seem high to get so many calls at once to do high security car jobs. But while the chances may seem slim, when that customer calls it is profitable to be able to respond that you can do the job quickly and correctly.

Yes, Lexus keys can be made without an existing key or knowing the cuts. But before actually making the key let's take a look at what makes up the key and then a few helpful tools that will aid us once we get to the service location.

The key is similar to a 4-track sidewinder, except the cuts go down the center of the key instead of on the outside edge. There are 8 cuts and 5 depths on both the left and right side of the key (See illustration 1.)

From the locks that were inspected, adjacent cuts were never more than 2 drops apart and opposite cuts (cuts left/right at the same space) were always equal to or less than 8 when added together. The reason for the spacing difference on opposite cuts is to allow the guide and cutter, and the wafer's tab that rides on the key to

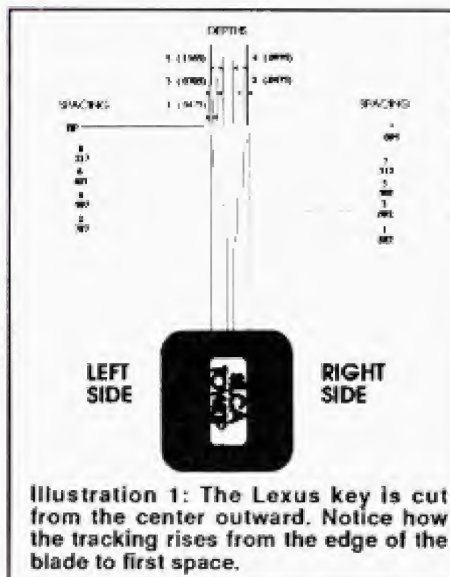


Illustration 1: The Lexus key is cut from the center outward. Notice how the tracking rises from the edge of the blade to first space.

pass unrestricted down the center of the key.

The locks are the wafer variety and utilize split wafers. Different from other high security tumblers is the small tab inside the wafer. This is the part that rests on the key and determines the drop for that space. This tab is chiseled top and bottom and is very delicate. It is for this reason that normal impressing is not recommended. (See photograph 2.)



2. This lock system uses whole and split wafers. The small tabs at the center of the wafers are what ride on the key and determine the depth of the cut.

From the locks observed, all the wafers are stamped with a number, ranging from 1 to 5, corresponding with the depth for that space. (I

should note that I have seen and measured keys with the 1 cut, but have not had the opportunity to dismantle a lock with this depth. While depths 2 through 5 had a corresponding number stamped on the wafer, I assume that the number 1 wafer follows suit. But we all know what assume means.) Thus far, all number 4 wafer's have had a notch cut in the top that straddles a corresponding bar or rise in the plug housing.

Examining the locks showed that the door locks contained wafers in spaces 2 through 7. Spaces 6 and 7 had split tumblers, and the rest of the tumblers followed the right side of the key. (See illustration 3.)

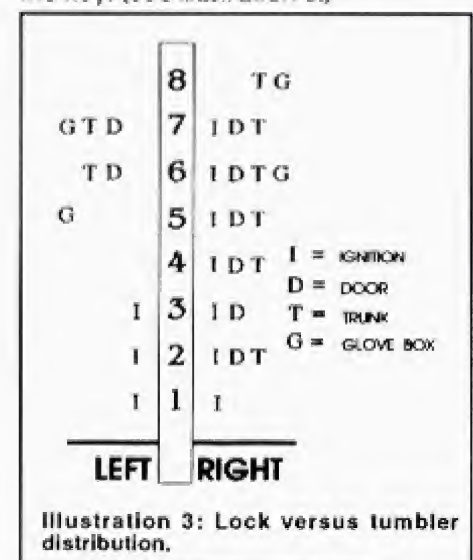


Illustration 3: Lock versus tumbler distribution.

The glove box contained spaces 5 through 8, and no split wafers. Spaces 5 and 7 were on the left side of the key, and spaces 6 and 8 were on the right side.

The trunk lock that I examined contained spaces 2 and 4 through 8. Spaces 6 and 7 had split wafers. The rest of the wafers followed the right side of the key.

Finally, the Ignition contained wafers in spaces 1 through 7. Spaces 1, 2 and 3 had split wafers. The rest of the wafers followed the right side of

the key.

With the above information we can better formulate a method for generating a key. From the key chart it's easy to see that the door lock contains most of the needed information, plus, it is the easiest lock to remove. The door lock contains all but cuts 1 right and left, 2 left, 3 left and 8 right. The 8th cut is in the trunk and glove box only, and can be progressioned.

The ignition, however, leaves us with cuts 1, right and left, and 2 and 3, left, to derive (all of these cuts are split wafers). The ignition cannot be removed without a key. It is, therefore, necessary to find an alternate means to complete the key.

Further inspection of the Ignition revealed that if cuts 1 left and 3 left were known, cuts 1 right and 2 left could be progressioned. This leaves us with 2 cuts that, with a specially prepared key, can be impressioned.

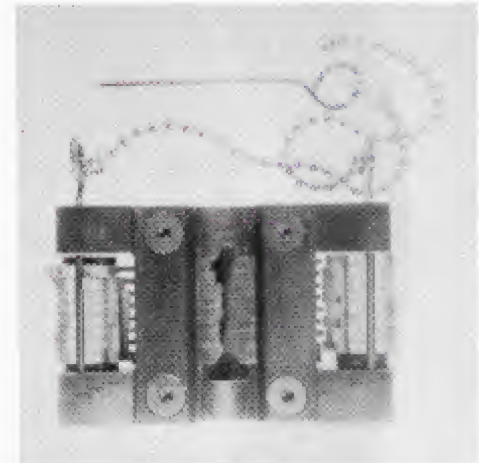
Fundamentals Of Cutting The Lexus Key. While a bit oversimplified, duplicating a Lexus key is done by cutting away the center of a key blank that isn't present on the original key. It's been the practice with originating high security keys to use depth keys. With the Lexus,

however, using depth keys is not only a little confusing but demands an uncommonly steady hand to avoid cutting adjacent and opposing (right/left) cuts too deep or at all; and making sure that the guide path is wide enough for the guide and wafer's tab to follow.

To avoid these problems we obtained and used Silca's Lexus key code cutting vice. With this tool we were able to cut Lexus keys more quickly and efficiently than by using depth keys. The dial-in depths also made it easy to keep track of the progress during the impressioning and progressing parts of making the key. And depths also made it easy to keep track of the progress during the impressioning and progressing parts of making the key. And when finished, the cuts and spaces were available for recording. (See photograph 4.)

Equipment And Supplies. Having the right tools always makes the job easier. For making the key to the Lexus I used:

Silca Club with Lexus guide and cutter; Silca Lexus key cutting vice (Code D708165ZB); Lexus key blanks; Solder; Propane torch; Magnifying glass; Auto tool kit; Dremmel tool; 2 Lexus prep keys.



4. The Silca Lexus key vice.

Preparation. As I stated earlier, impressioning is not a recommended technique for making Lexus keys. The small tab that rides on the key blade is fragile and may be easily damaged. This weakness is compounded by the split wafers.

In order to impression the 1 and 3 left cuts in the Ignition, therefore, it is necessary to make a key that will accept marks without much force. To accomplish this, we filled positions 1, 2 and 3 left, and 1 right with solder. This softer material gave us the impression marks we were looking for without damaging the wafers. We

Continued on page 39

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made two of these keys before we left for the job site.

Making the Lexus prep keys: To make the prep keys, we set up the Silca vice per instructions. All spaces were set to a 5 depth except spaces 1, 2 and 3 left, and 1 right which were set to a 1 depth. (Spacing for this article was done from bow to tip.) To make the cuts, the guide and cutter were positioned over the appropriate space and a plunge cut (a cut coming straight down) was made into the key. This was done to both sides of two keys. (See photograph 5.)

Once the keys were cut, they were placed in a bench vice and, using a propane torch, filled in with solder (See photograph 6.) Using a cutting wheel on a dremmel tool, we recut the center groove of the key; and flattened the surface of the key with a file. With some practice, we were able to produce prep keys void of air bubbles and flaws. (See photograph 7.)

Making Keys to the ES300. We were able to work on a 1992 Lexus ES300 4 door. The ignition and door locks are the same as the ES400. All of the vehicles examined had a remote lock/unlock system operated via a push button transmitter located in the bow of the masterkey. (See photograph 8.)

Opening The Vehicle. On all Lexus' we found what the dealer referred to as the "smart locking system." Simply put, once the vehicle has been locked, should there be an attempt to unlock it without remote activation or manually with the key, the system will automatically and instantly relock the doors.

To unlock the 300, we found it possible to pull the passenger window back and wedge it open. To do this, we placed a piece of cardboard over the car body and trim at the window. Then using a straight blade screw driver we gently pried the window out and inserted a wedge to keep it open.

Then using a long metal rod, we hit the electric lock switch on the inside of the door. Door locks open, then quickly relocked because of the smart locking system. In order to open it we had to pull up on the handle as quickly as possible, catching the door before it relocked. It took a couple of tries before we gained access to the vehicle. (See photograph 9.)

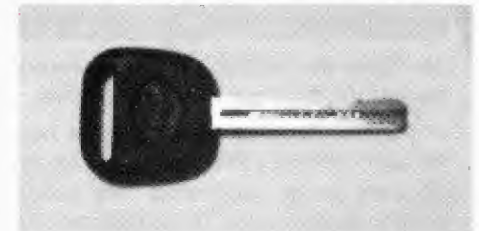
Making The Key. To make the key



5. Plunge cuts made using Silca vice.



6. Filling the prep key with solder.



7. The finished prep key.



8. The 1992 Lexus ES300.



9. Opening can be accomplished after pulling the window back and hitting the electric lock button.

we first removed the driver's door lock. Removing the door panel required taking out only a few screws, one of which was hidden beneath a small piece of fabric in the arm rest pull handle. Two two-piece plastic buttons were at the outside edge of the panel. Gently

lifting and removing the center button allowed the larger perimeter part to be pulled out.

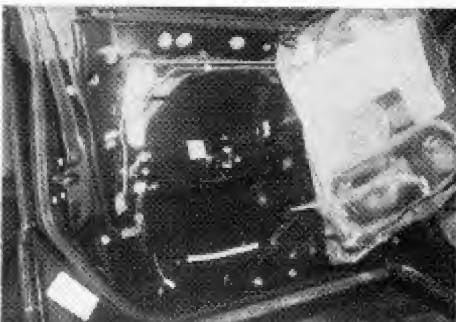
The door handle trim was gently pried off at the top and bottom of the lock button side. The small speaker cover at the top right part of the door was also pried off.

Using a door panel tool we lifted the door panel off the door and disconnected the three electrical connectors underneath. (See photograph 10.) The removed panel



10. Three connectors must be removed before door panel is removable.

exposed another metal panel held in with three screws. After these screws were removed the panel easily slipped out from behind the plastic sheeling. (See photograph 11.)



11. Another metal panel is underneath the door panel.

A small hole in the door allowed access to the lock and handle retaining screws. Using a 10 mm socket we removed the lock retaining screw from the handle. (See photograph 12.) Taking the lock



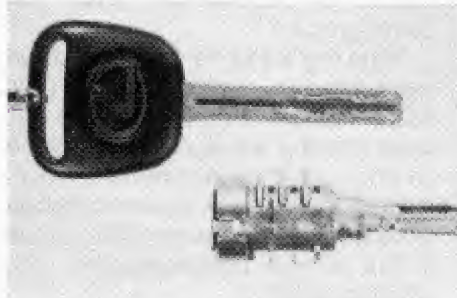
12. Removing the door lock retaining screw.

out required a slight clockwise twist to disconnect it from the handle. Two small harnesses attached to switches on the lock had to be carefully removed from the harness holders and connectors inside the door. (See photograph 13.)



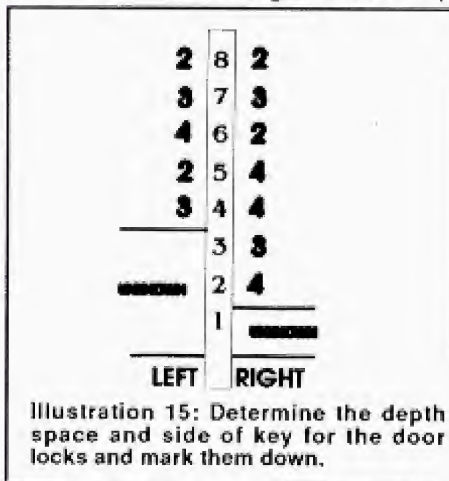
13. The door lock complete with switches and wiring harnesses.

With the lock removed, we were able to disassemble it, read the cuts and make a door key. (See photograph 14.) To properly cut the



14. The door lock contains tumblers in spaces 2 through 7.

key it is extremely important to distinguish exactly what side, left or right, of the key the water is traveling on. To make it easy we set up the key chart displayed earlier (See illustration 15.) Finishing the door key



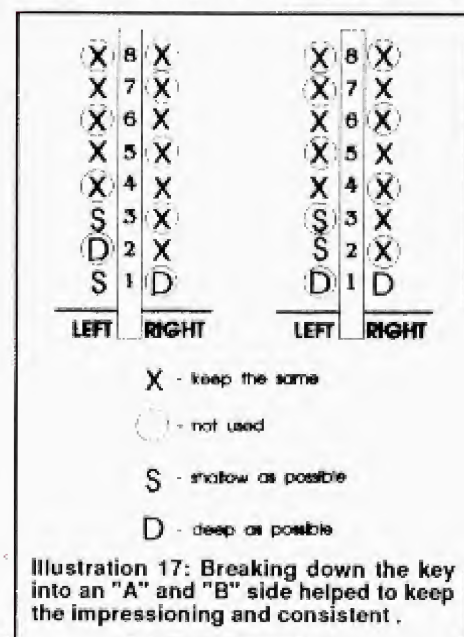
we progressed the trunk/glove box key and prepared for the Ignition. Completing the key required the final four cuts from the ignition.

To do this we set up two more charts using the information

obtained through the door lock. These charts were used to cut our prep key. Because only half the key is used on the right and left side when it is put into the lock, we designated an "A" and "B" side to our key. By doing so, we were able to remain consistent with where the lock was impressing. As the key is inserted into the ignition, we designated "A" as the left side of the key (as we face the ignition), and "B" as the right side. Marking the top of the bow helped make sure the key was inserted the same way all the time. (See photograph 16 and illustration 17.)



16. The ignition is dash mounted and almost identical to the Toyota Camry.



Following these charts for setting up the prep key made impressing possible. Where the "X's" are, we put the cuts we knew existed from the door and trunk locks. (See illustration 18.)

Then following what we learned about adjacent and opposite cuts, we filled in the rest of the cuts per the chart's requirement of either the shallowest or deepest cut possible for the given location. Remember; 5 is the shallowest cut, while 1 is the deepest. The circles showed us

2	8	2	2	8	2
3	7	3	3	7	3
4	6	2	4	6	2
2	5	4	2	5	4
3	4	4	3	4	4
			3	3	
			2	4	
			1	UNKNOWN	
LEFT			RIGHT		
SIDE "A"			SIDE "B"		

Illustration 18. Setting these charts helped determine how the prep would be prepared for cutting.

where cuts exist that are not being utilized on that position in the lock. (See illustration 19)

Once we completed the charts, we cut the prep key, marking the "A" and "B" side. After cutting, we examined the 1 and 3 left cuts of the "A" side with a magnifying glass. These are the only two cuts we needed to impression, and we wanted to check those cuts for markings before we made the first attempt.

We inserted the key into the ignition with the "A" side to our left. We turned the key towards the "ON" position, and wiggled the key up and down. This left adequate marks

2	8	2	2	8	2
3	7	3	3	7	3
4	6	2	4	6	2
2	5	4	2	5	4
3	4	4	3	4	4
			3	3	
			2	4	
			1	2	
LEFT			RIGHT		
SIDE "A"			SIDE "B"		

Illustration 19: Utilizing the rules regarding adjacent and opposite cuts, we were able to determine the preliminary ignition lock cuts for impressing and progressing.

at our two positions. To better view the marks we used the magnifying glass.

When the two positions were impressed, the ignition turned to the accessory position. *Do not force it further!*

At this point we wrote down the depths we got onto the original chart used for the door lock. From this point we were able to progression the final two cuts. (See illustration 20.)

Starting on the "B" side of the key, we worked on the 2 left cut. The idea here was to cut one drop at a time at this position until the key *did*

2	8	2	2	8	2
3	7	3	3	7	3
4	6	2	4	6	2
2	5	4	2	5	4
3	4	4	3	4	4
			2	3	3
			2	4	
			2	1	
LEFT			RIGHT		

Illustration 20: Once impressed, the correct cuts are recorded and used to help determine the final two cuts.

not turn. Again, do not use force.

2	8	2	2	8	2
3	7	3	3	7	3
4	6	2	4	6	2
2	5	4	2	5	4
3	4	4	3	4	4
			2	3	3
			4	2	4
			2	1	
LEFT			RIGHT		

Illustration 21: The final cuts are made and recorded.

Continued on page 97



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by Dale Libby

Removing Glove Box Plugs

"The Squeeze Lock Plug Remover works every time and there are no special skills needed."

Once again Frank Markisello has created a tool that will become a legend in locksmith tool history. He is responsible for several good tools manufactured by Aable Locksmith.

His previous offerings included tools to remove ignition cylinders on GM, Ford, and Chrysler automobiles. He was also responsible for an Ace type force tool as well as a GM door and trunk lock power device. All these tools work efficiently and do what they were made to do, but this new implement, in my opinion, is the best tool he has made so far.

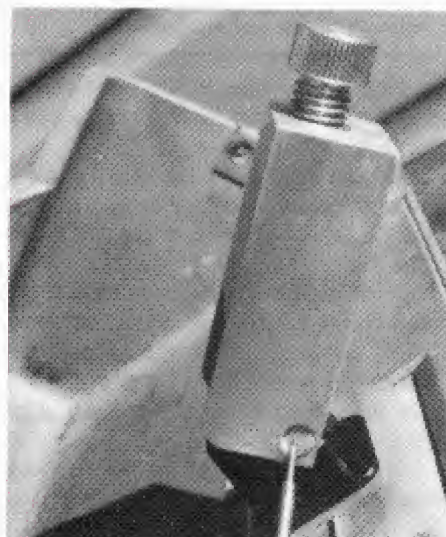
Frank has designed a most remarkable and diabolical tool which will remove all squeeze lock glove box plugs from G.M., Ford, AMC, Jeep, and Chrysler vehicles in less than 15 seconds. Its design incorporates a system which utilizes the locks' spring loaded plungers as a holding and pivot point. The tool is self-aligning and almost automatic. It is incredibly simple to use.

The Squeeze Lock Plug Remover works every time and there are no special skills needed to work it. It is one of those tools that you say to yourself, "Why didn't I think of that?" The tool can be used in the dark, if needed, right on the glove box door with no damage to the lock cylinder or tabs.

It takes longer to read about using the instrument than to use the tool on the glove box lock. I will break the operation into four parts; the last part being the making of the key and the reinstallation of the lock plug.

First, slide the tool over the lock and depress the squeeze plungers and let the plungers pop into the two holes in the tool. This will hold the tool in place and properly align the fingers. (See photograph 1.)

Second, flip the tool up to a straight position making sure the tool's flat surface between the fingers comes into contact with the plug. At this point the two fingers will be positioned correctly behind the plug



1. Step 1: Squeeze the lock to depress the plungers, place the tool over the lock, release it and have the plungers fit into the holes in the side of the tool, holding tabs. (See photograph 2.)

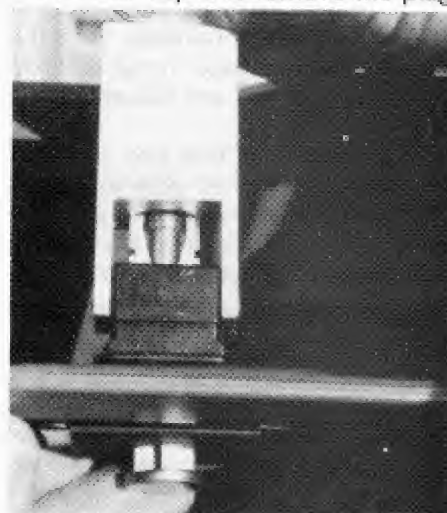
Third, hold the tool in the upright position while turning the knob at the top so the fingers do not slide out from



2. Step 2: Flip the tool to the straight position so that the fingers engage the locking tabs and hold in this position.

the tabs. The fingers will open the tabs and the shaft will push the plug out. (See photograph 3.) It is all in the engineered timing of the parts. After using the tool, back the knob out so the pressure is off the fingers. Now the tool is ready for the next job. Simple, diabolical, and efficient.

The last step is to remove the plug

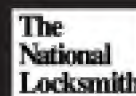
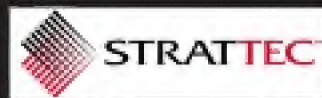


3. Step 3: Hold the tool straight while turning the knob at the top of the tool. The plug will automatically slide out of the front of the housing. The inner shaft will push it out. After using, back off the knob to be ready for next time.

and generate a key. Usually the first wafer in this plug is not a combination type wafer, but a retaining wafer and not part of the key combination. When the glove box key is generated, it can be used to make a door or trunk key depending on the type of car you are working on.

To replace the plug, just slide it into the lock housing and it will click into place. The price of the tool will be around \$40. It will pay for itself the second time you use it. You will eliminate broken lock tabs and cut fingers. Open and Prosper.

For more information, contact: Frank Markisello, Aable Locksmith, 91-10 Liberty Ave., Ozone Park, NY 11417 (718) 847-1377. \$



Mini- Section...

Safes & Vaults

In this section you will read about some of the manufacturers serving the locksmith.

Adesco Safe Mfg. Co.

Adesco Safe Mfg. Company is a typical example of the ups and downs of an American small business. In 1948 the founders of Adesco safe manufacturing company became part of the safe industry in a small garage in Compton, California. Glenn Halls started Star Manufacturing and was joined by his brother Gene in 1951. Star Manufacturing grew to become Starco Inc., then Star Safe, then American Security Products, then Amsec.

In the early 1970s the twenty year growing curve was met with a right angle learning curve for the American small business Entrepreneur's. A hastily conceived merger to secure growing capital for the company, left the founders without a company.

In 1975 Glenn Halls and Dee Diederich purchased the service department from the new owners of Amsec. This became known as Star Safe and Alarm Inc. Late in 1975 Gene Halls developed the Adesco safe line and secured the Underwriters T.L.15 and T.L.30 labels.

Serving the individual locksmith and the safe sales store, is considered a top priority with the company. Adesco is now in its 16th year of growth, adhering to a policy of focusing its sales efforts on reaching the individual who will actually be selling and servicing the safe. The company policy of dealing directly with the locksmith provides excellent service with larger discounts and lower prices to its customers.

Unique to Adesco is serendipity from the original Star Safe and Alarm Inc. Service Division, servicing all makes of safes in the field has shown us where the weak spots are that cause mechanical failure and loss of funds. This knowledge has translated into designs that combine better money protection with a long trouble free product life.

Adesco serves its large customer base from two manufacturing locations. The Corporate plant in Paramount, California serves the West coast. The Tucker, Georgia plant (established in 1979) serves the South and East coast, keeping freight costs to a minimum.

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Ambassador Safe

As the direct importer of Ambassador fire rated safes Ambassador Safe also carries a full line of replacement parts which includes exact replacement key locks and Korean combination locks. They also have in stock U.L. group 2 locks for direct replacement to their 18 models equipped with U.L. locks.

They now offer the LaGard Safeguard U.L. listed digital swingbolt on 18 different models. All factory combinations and key numbers are kept on file for every safe sold, making it easier to service lost combinations and keys without damage to the container. Cut keys by number as well as Korean key blanks can be shipped U.P.S. same day in most cases.

Ambassador salespeople have a combination of 40 years experience in the lock and safe industry, and are always looking for additional stocking distributors to answer the need for the smaller lock and safe shop who does not want to carry a lot of inventory, but still have access to the larger inventory of the distributor.

Ambassador Safe Company was created by Jeff and Larry Hale, owners of M.L. Lock & Safe Co., Inc., as a distributor for their own imported quality fire safes, and to distribute other major safe brands as well. This concept enables safe dealers, from the smallest one-man mobile locksmith to the largest safe dealers, to obtain one safe, a full container, or

any quantity or type of safe to fit their needs.

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American Security Products Co.

Consumer preference for electronic keypad locks instead of rotary mechanical locks has been growing for years. Amsec now offers an affordable and already proven reliable alternative. The Amsec KPL100 digital keypad lock now offers a U.L. Group II label and comes with a time delay lock function.

Amsec's digital keypad lock replaces most mechanical combination locks, is easily retrofitted in the field and can now be installed on any U.L. rated safe which requires



a U.L. Listed Group II lock. The newly retooled lock includes a die cast lock case with an internal relocking device. The new electronics enclosure has been scaled down in size to accommodate better installation and now offers an optional key control combination switch for added security purposes. A new optional "Slam Bolt Lock" is also available to auto-lock directly behind the jamb of a locker or safe where no boltwork exists.

The new KPL100 digital keypad lock can operate as a standard combination lock or at no additional cost can operate as a Time Delay



Lock (TDL) by simply setting an internal switch. Delay periods can be set to 1, 2, 5, 10, 15, 20, 30, 45 and 60 minutes. A flashing light emitting diode (LED) indicates delay period for added employee protection during an armed robbery attempt. A fixed five minute open period indicated by a Beep/Flash pattern is standard with every lock. Each lock is equipped with a prominent label stating: "WARNING...TIME DELAY LOCK - FLASHING LAMP INDICATES DELAYED LOCKOUT. OPERATOR CANNOT OVERRIDE."

The Amsec KPL100 digital keypad lock offers over 1 million possible combinations which can easily be programmed with 4 to 8 digits. After 4 incorrect input attempts the lock will not function for 15 minutes. The Amsec KPL100 lock operates on four AA batteries in the outside case. Even if the batteries are removed or drained (indicated by the LED lamp) the override code and the last combination inputted is held.

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FireKing International

On November 27, 1991, Mellink Inc. was officially acquired by FireKing International Inc., a company widely known in the office products industry as the leading manufacturer and supplier of fireproof file-cabinets.

The acquisition of the Mellink line allows FireKing to expand into the safe and lock industry with an already established product line. The complete Mellink safe line includes home and office safes and vaults, record safes, data safes and composite safes. In addition, FireKing will continue to offer the Mellink line of fireproof files along with its own line of high-quality fireproof files.

Mellink has been a leader in the fireproof safe category since 1899. Its complete line of safes includes one and two-hour rated models in a variety of sizes and configurations. Popular features of Mellink safes include day locks, relockers, numerous security factors, and chrome hardware. All safes meet exhaustive testing procedures for both heat and impact resistance and are U.L. listed and carry at least a manufacturer's 1-hour 1700 degree label. Mellink composite safes carry both a UL listed TL-30 burglary rating and a UL classified class 350, 1-hour fire rating.

Another benefit of the acquisition is that Mellink customers can now expect a high level of customer service, a trademark of the FireKing company since its inception over 40 years ago.

All Mellink products will now be produced at FireKing's New Albany, IN facility. This 100,000 square foot facility is a model of state-of-the-art technology and features CNC metal fabricating equipment. Thus, both Mellink and FireKing will remain US owned and operated, and made in the USA.

**For FREE Information
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Fort Knox

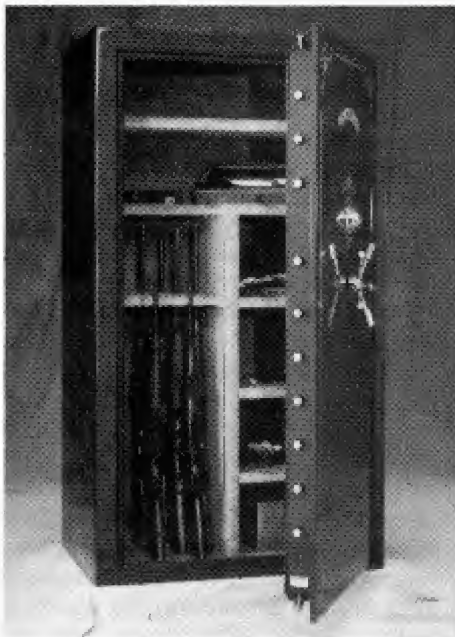
Fort Knox has always been a trusted name in security. It is with this in mind that the makers of Fort Knox safes and vaults create peace of mind for home and business. The peace of mind you experience by knowing that personal heirlooms, business and family records, guns, jewelry, and works of art are safe from burglars and fire.

From the beginning, Fort Knox has pioneered innovations to make vaults stronger, safer, and harder to break into. Just one example is the Chuck Yeager Executive Edition. It draws upon the same breed of technology, design, and strength that powered record-breaking test pilot General Yeager's X-1 jet. Among the variety of

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***National Auto Lock Service, Inc.
offers a wide range of equipment
and services for the Automotive
Locksmith. From tools and hard to
find key blanks to transponder
programming, we can take the
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features are concealed ball bearing hinges and patented rack and pinion multiple gear locking mechanisms such as those used in commercial bank vaults. Another Fort Knox exclusive is extra security. Each corner has a 1" active start bolt that eliminates entry from the corners of the door along with up to 24 1" active door locking bolts, strategically placed around the door perimeter.

Out of the many other features Fort Knox offers like the quadrifold door frame with recessed door, foil mechanical back-up relocking devices or fire-proof interior, the biggest value is the 100% satisfaction guarantee and a limited warranty on every vault, even against damage from burglary.

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Gardall Safe Corporation

Gardall Safe Corporation is pleased to announce the introduction of several new gun safes to their existing family of premium quality safes.

The timing of the introduction could not be more appropriate in view of the recently enacted or pending legislation in several states pertaining to gun control, firearm storage, and in at least one case a parental liability statute pertaining to a minor's use of firearms. A Herald Company newspaper recently reported of a grandfather in San Jose, California who faces a felony charge following the death of his 4-year-old grandson who accidentally shot himself while playing with his grandfather's pistol. Furthermore, one



might reasonably expect other states to propose similar legislation as public sentiment grows increasingly intolerant of crimes involving stolen firearms, accidental shootings involving children and crimes committed using a firearm.

These recently introduced safes are designed to store firearms and ammunition safely so as to prevent tragic accidents in the home or the theft of the weapons.

Models GS6022 and GS6030 are designed to house rifles and shotguns. Model GS 6022 is available in several optional configurations, as a gun safe allowing storage of either 9 or 15 guns, as a utility safe with four adjustable shelves or empty so that the dealer can tailor the interior to their customer's specific needs.

Model GS6030 also accepts rifles and shotguns. Optional configurations include a 15 or 30 gun interior, a four shelf utility interior or empty.

Model GS 252 is designed as a pistol safe. All models sold with an interior feature color coordinated carpeting. All Gardall gun safes come with chrome plated boltwork and have provisions for installing the rest of the Gardall product line with either a Group 2 or optional Group 1 electronic combination lock, hard plate, breakaway handle full length locking bar, recessed door and independent relocking device.

**For FREE Information
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New England Safe Co.

Many locksmith firms are overlooking the sales opportunities that exist in selling safes to their very own customer base. Sometimes the reasons for a locksmith not to sell a line of safes are valid. After all, safes are heavy, take up a lot of space and involve combination locks which are not the forte of the normal locksmith shop.

New England Safe Company has a line of safes that any locksmith firm can sell. The New England internal

control allows for the use of a standard mortise cylinder and security collar to operate the heavy duty reinforced lock bolt.

Now a locksmith firm can offer a safe to fit the customer's exact needs, stressing such features as same key convenience, ease of operation, master keying and restrictive keying.

A locksmith firm can build customer loyalty and repeat business by keying to a customer's proprietary key system. The New England internal control safe is extremely versatile which allows the locksmithing firm to use this product to resolve a variety of security applications.

New England internal control safes are available with slots and pull hoppers for bank bags with anti-fish baffle teeth. Units are constructed of heavy gauge steel, a rugged triple laminated bolt and pry resistive hinges. Units are made in the USA.

Do you have a customer that needs a truck safe for route delivery? A customer that could use a day safe that would integrate and use his own master key or interchangeable core system? Need to lock up cash register drawers? Need to trim the cash register to prevent loss? Need a recreational vehicle safe? Need a home safe? Need a courier box? All of these situations can be handled with a New England Internal Control Safe.

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Jim Ripley's Services

Jim Ripley, president of Jim Ripley's Services Inc. has announced the completion and successful testing of a new locksmith tool. The tool will be sold under the name of the "Safe Monkey Wrench II™." This tool was designed and built by Mr. Ripley who has been a locksmith and safe technician for over 20 years. Mr. Ripley has also taught safe penetration and safe servicing classes. It was his contact with the many locksmiths that convinced him that the drill was not the only and in many cases not the best way to penetrate safes.

The new addition to the Safe Monkey Wrench™ will overcome lock malfunctions, lost combinations, set relockers, as well as burglar attempts without drilling hard plate or precision drilling on many square door floor safes. Some can be opened in as little as 15 minutes.

The Safe Monkey Wrench™ and its

Continued on page 61



Jim Ripley's Services

Continued from page 58



new addition Safe Monkey Wrench II™ will increase the income of the less experienced locksmith. It will make openings easier for both the less experienced locksmith and the pro.

The Safe Monkey Wrench™ and the Safe Monkey Wrench II™ are available from Jim Ripley's Services Inc.

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Safe Corporation

Safe Corporation manufactures "Aanon" and "Safetron" burglary-resistant safes and U.L. rated "Eagle" safes at their plant in Boulder, CO.

Safe Corporation has introduced a unique universal door, the Uni-Door that can be interchanged between



in-the-floor, wall and depository safes. The revolutionary hinge system does not require any special tools to interchange the doors.

The Uni-Door incorporates all of the Aanon high quality features; it still has the same size hardplate, the same relocker, and all interior moving parts are plated. The door has four-sided protection: three locking bolts to each side and a dead bar on the hinge side. The front-loading depository safes have a saw-tooth baffle.

Added features of the invisible hinge system are a nice, modern appearance and the ease and speed of removing the door. A locksmith can interchange five doors in seven minutes (without anything more than a screwdriver). Instead of trying to repair a door in a busy place

of business, it can be taken to the service truck or back to the shop to work on. Or, if the locksmith has another safe at the shop (no matter if the lock is combination, key or electronic) he can swap the door while he fixes the broken one.

The hinge pins are toughened high duty alloy steel which revolve in a self lubricating bronze bushing. There is a slot in the door for easy lubrication when needed. The pins were tested for a life cycle of 20 years with five openings per day and did not show any wear.

**For FREE Information
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Sentry Group

With the introduction of the Model 1230 Fire-Safe compact safe from Sentry Group, locksmiths can offer their customers maximum fire protection in a safe that requires minimum home or office floor space.

As a low priced all-steel Sentry safe, the model 1230 is designed to provide security at a price home and business owners can afford. The model 1230

Continued on page 64



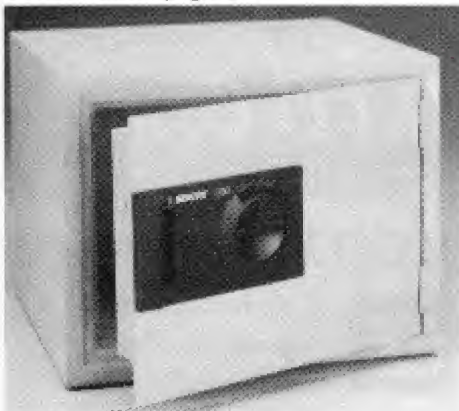
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Sentry Safe

Continued from page 61



rounds out Sentry's line, falling between the molded Model 1170 Fire-Safe security file and the steel Model 6250 Fire-Safe compact safe.

Sentry Group designed the model 1230 to offer low-cost fire protection and peace of mind. The model 1230 features a three-number combination lock and a bolt-down option. Even if the hinges are tampered with, four live-locking bolts keep the safe's door securely attached.

The model 1230 has also passed rigorous Fire Endurance Tests to earn the Underwriters Laboratory (UL) rating. In temperatures as high as 1700 degrees Fahrenheit, the safe will prevent valuable documents such as passports, marriage license, birth certificates, and other important papers from being destroyed.

The safe measures a compact 12-

15/16" tall x 16- 7/16" wide x 14 7/16" deep, allowing for easy storage in a closet or on a desk. Its horizontal shape holds standard 8-1/2 x 11" and legal-sized documents lying flat or standing on edge. With a 1.231 cubic inch capacity, the unit easily holds a number of important papers, along with a few personal valuables.

Sentry also offers total dealer support through in-store merchandising, co-op advertising, rapid-response customer service, and fast distribution.

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Wilson Safe Company

Wilson Safe Company was established in 1905, in Philadelphia. Presently, they supply safe stock to locksmiths from two warehouses located in Philadelphia, PA and Chicago, IL.

Wilson Safe directly imports its own line of fire safes, offering sizes of Diplomat Safes starting at .75 cubic feet storage capacity and continuing through 15 more sizes ending at a double door 24 cubic foot unit. All sizes have key and combination locking mechanisms. (S&G locks on

eight of the larger units), interior drawers and adjustable shelving.

Furthermore, a line of composite fire/burglary safes are available. The Reliance line offers 3" concrete filled bodies, S&G locks, and rating from "B" to TL-15 and TL-30. These units are the natural upgrade from the fire safe to a better security unit for small offices and homeowners.

Recently, Wilson has brought in two new sizes of fire safes offering an alternative to price plus size. The new small model has a 1 hour fire rating and dimensions of OD: 13-1/2" H x 17"W x 14-1/2"D. These have key and combination locks and interior drawers. These units are priced to sell, and fill in any line looking for an attractive price point on small home safes.

In addition, Wilson Safe is a distributor for AMSEC/Star, U.S. Security depository safes, and Schwab insulated filing cabinets.

All safes and files are stocked in the Philadelphia warehouse for these manufacturers, where the locksmiths can pick or delivery via common carrier or Wilson's own trucks can be arranged.

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by Shirl Schamp

Car Opening Techniques

"This month let's talk about how to open cars featuring windows that are not lipped to prevent wedging."

We are going to continue our conversation on ways to open locked cars. In this series of articles, we are going to concentrate on how to open the type of car, instead of worrying about the make and model. In other words, we'll be looking at the kind of linkage, windows, etc. that you are faced with. Then, we will pick the easiest approach to open that vehicle. When you learn to evaluate a car this way, you won't be stumped if your reference book doesn't contain the particular car you are called to open.

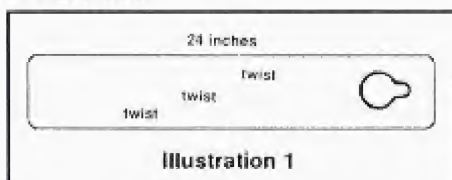
This month, let's talk about how to open cars featuring windows that are not lipped to prevent wedging out. An un-lipped window can be brought out from the car with a wedge. Wedge just enough to create an opening for tools that will work the lock from the inside of the car. Be careful to bring out the glass only just enough to permit entry of a tool. Don't tempt fate by trying to create space to reach your hand through! You don't need much room to work in a tool. I always carry half a dozen wedges with me so I'll always have one when I need it.

For an un-lipped window, place the wedge in the upper corner of the glass on the handle edge of the door. In photograph one you will see that a clip is located on the upper edge of the door to stop the glass from being brought out. Do not work too close to the clip. If you find that a clip prevents you from bringing out

the glass, use a different method to open the car. Never use undue force to wedge a window or you could break it. The clip on this car was extending out beyond the glass, so we were easily able to wedge the window.

Wedges are available through all your distributors. Make sure you do not use wedges made of metal because they will mark up the car. Wedges can be made of wood, rubber or plastic. You can make them yourself by sawing wood on an angle. You can even use a door stop. But professionally manufactured car opening wedges do offer advantages.

There are a number of tools you can pass through a wedged window. The tool you will use depends on the type of locking mechanism which secures the car. A flat bar with a cutout for the button will do a good job on those buttons which have the knob on top. (See illustration 2.) Wedge the glass only the distance necessary to insert this button tool.



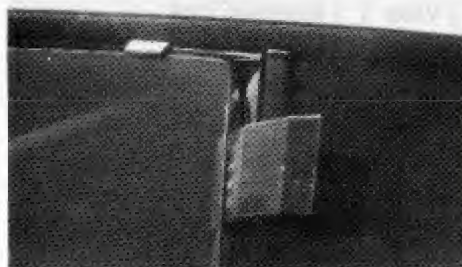
Position the tool over the top of the button as in photograph three. You will also note the the tool has

been twisted so that the cutout for the button will lay in a horizontal position while the handle is held vertically. This will accommodate the window and the jamb. This method does work best when the button is in the center of the window sill instead of on the edge where it is sometimes found. On those buttons near the edge, just go in at a sharper angle with the handle held high into the corner of the window.

A tool called the Across the Car Opening tool works really well on Camaro, Trans Am, Toyota and many, many more models which feature a sliding door lock or even an electric lock button. This tool is available through your distributor. The tool is made in several pieces so you can screw it together when you need it. But I suggest that you braze or weld the joints so that it will actually be stronger. After welding the tool, you will carry it as one piece. I have placed hooks on the inside roof of my van, and I hang my tool there.

I have made a hook type bend with a blunt edge on the tip of my Across the Car tool. With this end reached through a wedged window, you can pull a button mounted on the door panel, or even pick up a set of keys. If you are able to pull a set of keys out of the ignition and bring them to the window, you can learn to copy the key by visually looking at the cuts. I don't suggest actually trying to bring the keys out through the window. It would be dangerous to try and wedge the window out enough to make room to bring the keys through.

Insert a wedge, and pass the Across the Car tool into the interior. (See photograph 4.) Pass the end of the tool all the way through the car to the opposite door. Place the tip against the slide button and push, sliding the button as in photograph five. Or you could hook the lock



1. Clip on window



3. Position the tool as shown here.



4. Inserting across-the-car tool.



5. You can either push the button...



6....or hook and pull it as shown here.

button and pull it, unlocking the door as in photograph six.

Some cars feature a lipped window with a vertical button. I suggest placing a wedge between the glass and the door, spreading the panel open just a little bit. (See photograph 7.) If the car was made



7. Spreading the window with a wedge.

before 1980, Slim Jim for the back of the lock (pawl or cam). If the car was made after 1980, use a Slim Jim with a sharp bend on the end, and go for the linkage. Sometimes inserting the Jim with the sharp bend can be tricky. First insert the wedge between the window and the door panel. Then insert the bowed tool into the door bowing inward into the panel. (See photograph 8.)

Often the window will have a ledge on the bottom and you can't get the bowed Jim past it. Here's how to overcome this problem. First insert a regular Slim Jim into the door with a slight outward bow. Then



8. Properly bowing the tool inward.

place your tool with the inward bow directly on top of it. Slide it down the first Slim Jim, past the ledge on the window and remove the first tool. (See photograph 9.) Your tool will enter the door panel and be angling in just the right direction.



9. Insert a second tool past the first.

Continued on page 98



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by Jack Roberts

Opening A Retail Location

"Here are some ideas to consider when thinking of going from mobile to opening a fixed location."

Many locksmiths operate strictly mobile. Others have both a shop location and one or more mobile units. In this article, we will look at some of the planning and considerations needed if you are thinking of adding a fixed location to your mobile operation.

Whatever your situation, in this article we will look at the many circumstances and problems you may encounter when you plan for a fixed location. Lots of advance planning is the key to successfully opening a retail locksmith shop.

The second most important thing is financing. You must have money available or your plans are not going to work out. An architect can plan and design a beautiful building, but if there is no money for construction, it will never be built.

I have seen many estimates of what kind of dollars should be available to start a locksmith business. These range from \$20,000 to \$40,000 or even higher. Beauty is in the mind of the beholder and estimates reflect the thinking of the estimator who may have either simple or grandiose ideas. You have to do your own thing based on your own plans and available funding, each one of which complements the other.

This doesn't mean that you have to have a pile of cash on the planning table, but it does mean that you need a good line of credit from your friendly banker or wealthy father-in-law. People who lend money want to lend money. That is their business. But they also want it back, with interest. If your abilities are known, if your plans are well made and if the numbers look good on paper, money lenders, like gamblers, will go for the odds of getting a return on their investment.

Your plans must include a location, and the location must meet several criteria which are

established in your plans. The customers you intend to service will play a big part in your proposed location. If you feel that a developing residential area holds prospects for long term growth, you may want to consider space in a small strip center where you can offer sales of new products, inside service and repair and also mobile service. In selecting your location visit those places in the area who are or can be potential competitors.

Visibility is a big factor in choosing your location: the type and size of signage which is allowed must be investigated. Insurance rates can vary widely depending on other occupants in the strip or building. Parking is a high priority consideration. Watch the parking area for several days to determine if customers of the adjacent businesses come and go quickly or park for long periods of time. Ascertain if there is space where you will be permitted to work on a customer's car.

Discuss with the property manager the parking of your service vehicle(s). They shouldn't be around much during the day but overnight security is important to you. Find out if the parking area is lighted all night and if police or security patrols cruise by with any regularity.

Take some time to thoroughly investigate all of the pluses and minuses of your proposed location. Ask questions of the other tenants. Find out if management is really as cooperative as they would have you believe. Ask about rent and the frequency of increases. Do your homework carefully and then apply it to your plans.

Rent, of course, and the lease agreement, will be the major consideration in your decision for a location. It will be two or three years before you are firmly established. But the rent is due, regardless of your

sales. Be prepared, by financial backing, i.e., credit line, money in the bank, to meet all of the fixed expenses. Plan on short rations for awhile. Eliminate all spending that is not absolutely necessary, purchase carefully and work, work, work.

Review your plans every three or four months, and change them if necessary. Regardless of your location, the exterior and interior of your store should be clean, neat and well organized. Floor displays, gondolas, wall pegboard displays and sales racks should be kept neat and complete.

This is called merchandising, and the better an item is merchandised the chances increase that it will sell. Specials, if you have them, should take front center in your display area. Make them easy to purchase and hard to resist. Now, about specials, you shouldn't have to run specials at all, but if you do, do it for a reason and that reason is to turn dead or slow moving items into cash.

Keep your sales area clean, neat and well stocked. Offer security hardware that is not available from the chains and discounts. Right now you have the advantage with your knowledge and expertise for service such as rekeying to the customers key, master keying, and installation. But this advantage may gradually diminish over the next few years. Keep up with your educational plans, improve your skills and merchandise higher security items.

The national organization, (Associated Locksmiths of America in Dallas, TX) of which you should be a member, has excellent merchandising materials available. (You can call the association at 214-827-1701.) Manufacturers have sales aids which are yours for the asking and many distributors will assist in your merchandising plan. The work area of your store should take as much, if not more, planning than the



sales area.

This is the place where you can make money and it should be arranged so you can work quickly, comfortably and profitably. Time spent looking for a tool or part is money lost. A well organized bench is a real pleasure to work on, a helter skelter bench is a real pain.

Most locksmith stores I have visited take a lot of pride in their key board and key machine bench. After the sales area, this is the part of the store they want the customer to see. Many people, accustomed to one machine and a carousel at the dime store, are overwhelmed when they walk into a locksmith store. "My God, look at the keys!", "Is there any key that you don't have?", "What do you use all those machines for?"

"Do you have to have that many key machines?" are questions that we hear almost every day. It is impressive for a first timer and is your opportunity to sell a bit of the other things that you do and they didn't know about. Know your keyboard and be able to snag a blank off of its hook quickly.

This is very impressive to the customer who is accustomed to watching a person look, and look and look at a keyboard to spin a

carousel like a top. Also, you aren't going to make very much money if it takes more than a couple of minutes to find and cut and get paid for a \$1.25 key.

Getting paid is the thing that often takes a lot of time and you have to play your hand carefully and wisely in order to determine if this is a one shot one key sale, or if there is potential for additional business from cutting just one key.

In our own store we have a sign that reads "keys in about a minute" and a typical scenario goes something like this. "I'd like to get this key made."

"Would there be something else, please?"

"No, just a key."

"That will be a \$1.32, please."

While all this talk is going on we have picked the blank, cut it and usually are waiting for the customer to dig out the cash.

"Boy, that was quick, it didn't even take a minute."

Get the money and get on to whatever you were doing, or wait on the next customer, without seeming to be rude. Time spent at the register with idle chitter chatter while a customer is digging out small

change is non-productive time and should be kept to a minimum when at all possible.

On the other hand, some of our best accounts developed from cutting just one or two keys and from playing the hand correctly from the customers opening remarks or questions.

Plan your key board layout very carefully. You will no doubt start small, but leave room for expansion as you determine what blanks are most often needed in your area. Visit with other locksmiths and see how they organize their keyboards. Generally I have found that alpha-numerical by lock manufacturer is the system most often used. This is the way key blank catalogues are laid out and cross referencing is often easier this way. Get every key blank catalogue you can find and study the numbering systems used by each manufacturer.

Design your board so that it can be changed easily, leave some space between hooks for future additions, use moveable tags rather than stick on labels for your I.D.'s, put your primary number and maybe a couple of others on each tag and use colored dots for pricing.

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Watch your costs carefully and price accordingly. A reverse of a popular blank can often cost 15 or 20 cents more due to low volume. Many sectionals are higher priced than the more popular blanks. Colored dots on the ID tags will help you to keep these prices sorted out.

It will take a long time for you to determine what numbers you should stock and you should be careful not to over purchase just to fill up the board. Most all distributors will sell in units of 10. Even though the price per blank is higher than for a box of 50, your initial cost is lower. If they never sell, you haven't lost a lot of money.

As your business grows so also will your key board space grow and you may eventually have several boards, for domestic, domestic auto, foreign, foreign auto, specialty, etc. If you are in an area of older homes you may need a board for bit keys, and, of course, you will need a means of cutting them other than hack saw and file.

A machine for cutting bit keys is in the high dollar range and you should be careful about making such a purchase. Find out if anyone within a few miles has the capability and perhaps refer those occasional requests for bit keys to them. You just

have to play it by ear and go with the flow.

Your key machine selection will take a lot of time and can be one of your largest expenditures. No doubt you already have machines in the service vehicle. But now you'll need new ones for the shop. For high volume key cutting you may prefer a heavier duty machine. Talk to other locksmiths, find out their preferences, attend trade shows and look at the merchandise.

Determine what your needs are, very carefully, before purchasing a piece of equipment. You are looking for speed, ease of operation, dependability and service. You should be satisfied on all of these points before laying out your hard cash.

Many duplicators, and code machines, have the capability for cutting flat steel keys by changing the cutting wheel and often the stylus. The time spend in this operation may not be cost effective, however. Average prices for flat steel locker keys are in the \$2.50 to \$3.00 range, and if you have a machine that is set up for flat steel, you can make money at these prices.

The amount of business that comes into your store will determine if it would be smart to invest in

perhaps a used duplicator that can be set up for flat steel only. In our shop we have two machines for flat steel, but this is because we have several large accounts that have hundreds of lockers requiring constant replacement of keys.

Your code machine should have at least two cutting wheels, one for wafer and small pin tumbler codes and one for regular pin tumbler codes. Usually all that is required is a quick change of the cutting wheel to go from one to the other although the vise jaws may also have to be changed or switched.

Many shops ultimately wind up with two code machines, one for small pin and wafer and one for large pin. This doesn't happen overnight and volume will dictate what you will do in the future.

Code books can be a major expense and the books that you use should be very carefully selected. Regardless of the system that you decide is best for you, take the time to study it thoroughly. Know how to use it and find codes quickly if you expect to make money in this very

Continued on page 98



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News of the Weird...

Locksmith To The Rescue!

"When Fallick arrived, he immediately drilled two holes in the side of the safe to allow oxygen in."

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Bridgeton Evening News, Bridgeton,
NJ, January 8, 1992.

by Joe Van Leer

It started as an innocent game of hide-and-seek for 2-1/2-year-old Robert Buttner, but the boy found himself a little too well hidden when his sister accidentally locked him in an office safe Wednesday afternoon.

Buttner was screaming while locked in the fireproof steel safe but he seemed calm after his rescue about one hour later. The youngster was not injured and did not appear traumatized after he was released from the safe. He thanked his main rescuer, John Fallick, a locksmith from Advance Lock and Safe Company in Rosenhayn.

The boy and his 4-year-old sister, Cate, were playing hide-and-seek in the township municipal building on Main Street in Dividing Creek, when Cate accidentally locked her brother in the safe.

"I was worried when I heard him screaming, but became more panicky when he became quiet," said Lois Buttner, Robert's mother and chief financial officer for the township. This children's father, Joe also was at the scene.

Larry Jordan, emergency management coordinator for Downe Township, said the emergency was reported around 11:55 a.m. The ordeal was over by around 12:55 p.m.

Jordan said the safe was open in the clerk's office because officials were in the process of moving into

the building. However, the clerk, Merle R. Bailey, could not be reached for the combination to the safe.

When Fallick arrived, he immediately drilled two holes in the side of the safe to allow oxygen in through air tubes. With careful precision, he then drilled a larger hole in the front of the safe.

"I had to drill precisely at the point where the fence was located. The fence is the main part that protects the lock from opening," said Fallick, adding that he had to disassemble the fence, as well.

"I was mostly concerned about getting air into the safe," said Fallick.

Rescue squads from Downe Township, Millville, Dividing Creek and Newport Fire Company responded to the emergency. §

Below: Robert Buttner after being rescued from safe in Downe Township.

Right: The hole that was drilled in front of the safe that saved the life of 2-1/2-year-old Robert Buttner after a one-hour ordeal Wednesday that saw the little boy locked inside the safe at the Downe Township Municipal Complex.

Photos by Joe Van Leer





Beginner's Corner

Sentry Safe Manipulation



by Eugene Gentry

If you are serious about safe manipulation, I would suggest that you purchase the book *Guide to Manipulation* by Robert Sieveking, offered by *The National Locksmith* magazine. This book is a complete course on manipulation of all types of safes.

I will leave explaining the exact workings of the combination lock to the experts, but if you would like to experiment and have a little fun, try manipulating a Sentry fire safe.

Burglars had smashed open a Sentry safe with a sledgehammer, and the owners wanted it hauled away. I took the door home to play with the combination, but got into trouble when my wife wanted to know what a safe door was doing on the living room floor. In spite of this, I was able to find the combination by manipulation.

First we have to know what type of dial is on the safe. (See photograph 1.) This safe has a direct in type of fence. That means there is no spring, and the fence will not go into the gates until the handle is turned. (See photograph 2.) To help you determine the type of dial, turn the dial while pressing down on the handle. If the dial binds, then you have the direct in fence.

Next, we have to know how many wheels are in the wheel pack. Clear the dial by turning four times to the right, stopping at 50. Now, turn a complete circle left and before you pass 50 you will hear a click indicating one wheel. Keep turning left, a full circle. Another click indicates two wheels. More turns do not show any more wheels. This is deceiving on this safe because there are actually three wheels, the third wheel is the driving wheel solidly attached to the shaft of the dial. You



1. Fence in the wheel pack. Note false gates on the third wheel.



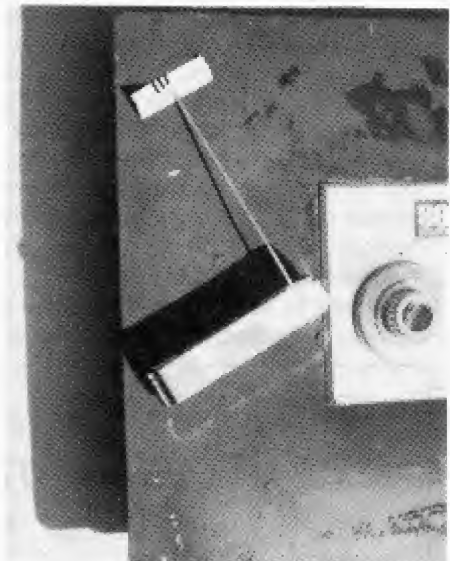
2. Fence in locked position.

can see the wheels in photographs one and two with the fence in and out of the gates. Note the false gates on wheel three.

In manipulation, in order to find the gates you have to measure the distance that the fence is moving from the top of the wheel into a false gate, or into a real gate. To do this, I taped a six inch pointer onto the handle. This pointer amplifies any movement of the handle. At the end of the pointer, a strip of masking tape is placed on the safe.

Clear the dial with four turns to the left. Starting at 0, dial to 2-1/2, press down on the handle until it stops. Make a line mark on the masking tape at the tip of the pointer. Dial now to 5. All the wheels are turning at the same time. Press down on the handle. If the pointer has changed position, make another mark on the masking tape. The downward pressure on the handle should be the same each time. You might use a rubber band on the end handle and attached to the safe to insure an even pressure each time.

Continue all the way around the dial to the left, pushing on the handle every 2-1/2 numbers. At first you will have only two marks on the tape, about an 1/8" apart. The first mark is the top of the wheel. The second mark is the bottom of the false gate. If the pointer goes below the second mark, it is an indication of a real gate. The third mark, in photograph three, is the gate.

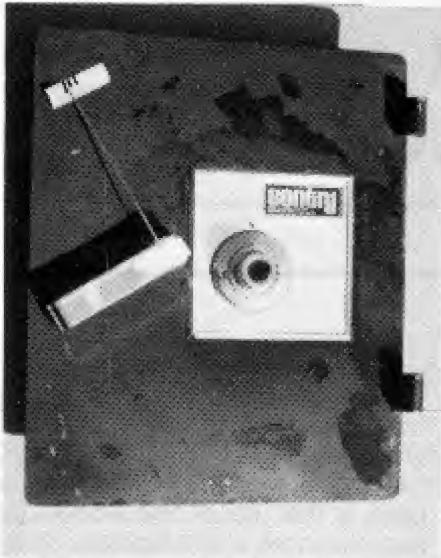


3. Pointer indicates fence on top of wheel pack.

Let's try manipulating this old burglarized safe door. First, I dialed all wheels to the left, pushing down on the handle every 2-1/2 numbers. On this safe, the handle went down to the third mark at 23-1/2. I made a note of the number, then kept dialing to 100 with no more indications. I am sure there is a gate at 23 or 24, but I don't know which wheel it is. (See photograph 4.)

Now I dialed all the wheels right until the dial was cleared, stopping at 0. Turning the dial to the left at this time, only number 3 wheel is turning. At 23, the handle dropped to the third mark, and I knew the third number, 23.

I kept on dialing left and just before 0, the second wheel started turning. I would dial 2-1/2 numbers, but this time I would dial the third wheel back to 23 so the fence

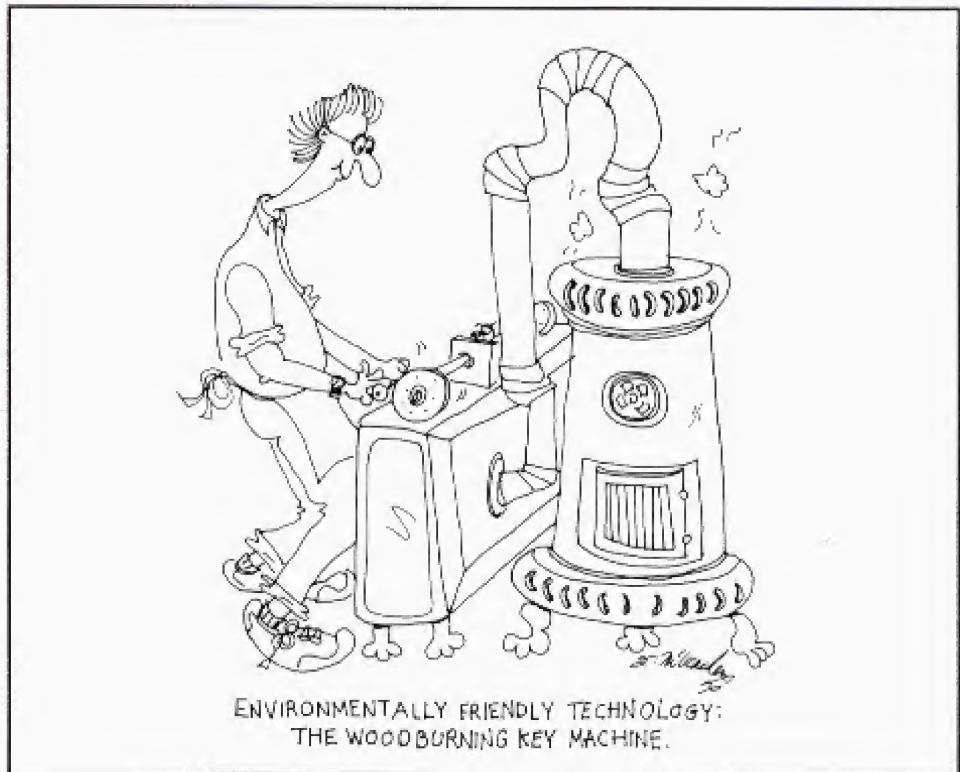


4. Pointer on third mark shows a gate.

would go deeper into the wheel pack. On this full turn there was a slight indication at 35.

Still on left turns, the first wheel now starts turning before 0. All three wheels are turning. At every 2-1/2 numbers, I would dial back to 23 on the third wheel. At this turn, I again picked up the slight indication at 35, and at 95 the handle dropped to the gate marker on the tape.

To test to see which wheel the 95 was on, I cleared the dial to the left,



stopping at 95. This put the number 95 on the first wheel. Dialing right now until number two wheel starts turning, I stop every 2-1/2 numbers, going back to 23 on the third wheel. At 38, the handle went completely down. The fence entered the wheel pack. Had the door been on a safe,

the safe would be open. The combination was L-95, R-38, L-23.

In any manipulation, you have to know what the wheels are doing inside the case. Practice on a dial where you can see the wheels moving, and memorize the action. §



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The Lighter Side

Lock-Key Day



by Sara Probasco

"What are you doing?" Don asked, watching me flip through my calendar book, one morning at breakfast.

"I'm making birthday entries on my calendar, so I won't forget anyone this year. I never realized, before, how many holidays there are."

"Yeah. By the time we get over New Year's it's Valentine's, then Easter, and the Fourth of July. It's always something," he replied flatly.

"You're only seeing the tip of the iceberg, dear heart. In January, we have New Year's and Martin Luther King Day. In February, there's Lincoln's birthday, St. Valentine's Day, the Chinese New Year, and Washington's birthday. In March, Orthodox Lent begins, and we have Ash Wednesday, and St. Patrick's Day." I continued, reading the fine print on my calendar. "April brings us Palm Sunday, Good Friday, Passover, and Easter, along with Professional Secretaries Day. May contains Mother's Day and Memorial Day."

"What ever happened to May Day?"

"I don't know. It's not listed here."

"Remember when the school kids used to have special field day programs and dance around a May pole weaving long colored streamers?"

I looked at him suspiciously. "I'm afraid that was before my time."

"I guess the Russian's May Day military-might parades put a squelch on all that, years ago."

"You may be right. Anyway," I continued, "June hosts Flag Day and Father's Day. July's only holiday is Independence Day, but I guess that's enough. Hmmm. That's strange."

"What is?"

"August has no holidays at all. I wonder why."

"Maybe they figure too many people would be on vacation then, and they wouldn't want to miss out on anything."

"Maybe. Then there's Labor Day in September and the beginning of Rosh Hashanah. In October, we celebrate Yom Kippur, Columbus Day, United Nations Day, and Halloween. The first holiday listed in November is Election Day, which I never considered to be a holiday at all. Then there's Veteran's Day, Thanksgiving Day, and my birthday."

"I don't believe that's on there."

"What?"

"Your birthday."

I grinned sheepishly. "I just wanted to see if you were paying attention. We wind up the year with Chanukah and Christmas, in December, and start all over again with the new year."

"That's quite a list."

"Thirty, in all. Fifteen are religious observations, if you count Thanksgiving and Halloween, both of which began that way. Nine are Christian in origin, six are Jewish. Eleven are, for the most part, political, two are clearly commercial in nature, and then there are the American and the Chinese New Year's observances."

"I didn't hear you mention Mother-in-law-day or Step-grandparents'-day."

"I am pleased to say, my calendar hasn't gotten around to listing such recent additions to the commercial scene yet."

"It's still quite a list." Don returned to his newspaper.

"Wouldn't it be nice if we had a holiday or two when all the locksmiths could close shop and get away for a long weekend?" I contemplated the vacancy of August for a few minutes, before an idea took hold. "You know what we need to do?"

"What's that?"

"Commandeer August for a security-related holiday."

"They've already started promoting October as 'Home Safety Month.'"

"I know, but look at the calendar." I pointed to the page in question. "In October, they're competing with Yom

Kippur, Columbus Day, United Nations Day, and Halloween, while August," I said, flipping back two pages, "is wide open. Besides, it's a natural. We've already established that's when most people take off for a vacation. What better time to make them security conscious? Besides, if all the locksmiths closed their shops and went away for a holiday at the same time, the public might realize just how much they need us, in our absence."

"You have a point," Don admitted, laying his paper beside his plate. "We could launch a massive advertising campaign. 'When planning your summer vacation, remember how important a quality deadbolt can be to your home security, while you're away. Don't leave home without it.'"

"We could sponsor programs during the first week of school, and teach the children about basic security in the home," I suggested.

"They could study about some of the greats in the lock and key industry: people like Linus Yale," Don injected. "Besides that, we mustn't overlook the commercial implications of such a promotion." Dollar signs lit his eyes. "We could establish a nationwide network of locksmiths, like the florists. Call it TeleLock and encourage people to wire security baskets filled with deadbolts, door alarms, key chains, and the like, to friends and loved ones, everywhere."

"Also, consider the greeting card aspect. 'I love you in the morning. I love you late at night. This card is to remind you to lock up when you turn out the light.'"

Don stared at me wordlessly for a moment. Then he said, "We may want to work on that idea a bit."

"Well, how about this: 'To discourage unwanted intrusions and to keep a thief at bay, have your present door locks all re-keyed, and install deadbolts today. Call A-I.'"

"Sounds like an old Burma Shave ad. I think something a bit simpler might be more appropriate. How about, 'For birthdays or anniversaries, say 'I love you' with a gift of security

Continued on page 99

Shop Talk

Helpful Questions and Answers

Written by all of the following authors: Dale Libby, Robert Sieveking, Dave McOmie, Shirl Schamp, Don O'Shall, and Jack Roberts.

Shop Talk answers readers questions on any locksmith related topic. Only letters judged to be of general interest will be published. We regret that we cannot answer individual letters. Because of the volume of mail, only those questions answered in the magazine will receive answers. Send your locksmith questions to Shop Talk: The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107.

Q: I have a York Insulated file cabinet on which the lock cylinder unlocks by itself. I would like to know how to remove the lock and repair it so it will work properly. Any information on this would be appreciated.

Michael P. Rafferty
New York

A: Sir, your question is somewhat ambiguous, but I will touch on some general servicing features for insulated file cabinets. If the lock is located in the drawer itself, then the front of the drawer, including the insulation can be disassembled, usually by removing a couple of locating screws and lifting up on the front of the drawer.

By doing this, the entire front of the cabinet will come off and the lock can then be removed and replaced with a modern type of lock cylinder. This is the easy one to work on.

If the lock is located in the body of the cabinet, whether on the sides or on the top, then there can be a problem. Sometimes the lock is installed, and the insulation is poured into the walls of the cabinet. If this is the case, then sometimes it is impossible to service either the lock or the cabinet linkage because it is encased in cement.

If this proves to be the case, or if a replacement lock is unavailable, the

only thing you can do for the customer is to suggest a replacement locking system of some kind. One of the easiest to work on and install is the movable side-bar type of filing cabinet lock. This is the unit that can be purchased for a two, three, or four drawer type of cabinet.

The unit installs on one side of the cabinet and blocks the opening of the drawers when it is locked shut and fastened by either a key or combination padlock.

Remember, a filing cabinet like this is meant to give fire protection and some privacy to the customer. It is not a safe or chest, and should not be used as one. If the cabinet is to be used to store computer disks or other electronic media, be sure to point out the requirements of a "Data-Safe" and the need to keep the computer materials at a temperature of below 100 degrees. Your basic insulated file cabinet or safe will not do this.

These computer elements have to be protected from both heat and moisture. If he needs something small, then small data containers can be put inside the insulated file cabinet.

Q: A customer brought in an old safe, recently repainted, and asked me to open it. The combination is Yale and there is evidence that the door had been drilled and filled at three spots near the combination. The safe is 30" wide, 24" high, and has the numbers 12534 stamped near the top of the door. Both the front legs and the back legs have the name Herring on one leg and the name "Farrel" on the other leg, and both words are followed by a squiggly configuration that looks like an "S".

The back of the safe has large screw-heads flat and flush, three across the top and bottom, with 4 screws on each side of the back. These are slot type screws about 3/4 inch in diameter. I would appreciate

some clues on how to approach opening this safe. Thank you.

Berkley Ruiz
Georgia

A: It sounds like you have quite an old safe or possibly money chest on your hands. The screw type assembly was quite common on money chests before the turn of the century prior to the advent of gas or electric arc welding. These chests were actually laminated together, the screw heads filed flat and filled with a lead type substance, then painted. One way to discover their location was to run a small torch over the painted surfaces of the locked unit, and the screw heads would turn a darker color.

Taking out these screws will prove a bothersome and worthless task, so do not try. (They have to be chiseled out at best). Sometimes these steel plates that are laminated together are hardened like hardplate, and they will alternate between soft and hard steel layers.

The way I would attack this unit would be to put pressure on the handle, if it has one, and see if the dial binds up. If it does, then the unit had a direct drive type lock in it. If not, then my guess would be a Yale OB type lock, with the drop-in at 6 o'clock.

Look to see where the holes have been drilled. Chances are that it will be easier to drill through a repaired hole in the door than the door itself depending on how the safe or chest was repaired. On most of the old safes, there are only three places in which to drill: either at 6, 9, or 12 o'clock. You can drill for a direct read, or drill and transfer the numbers to the drop-in.

When working on older unfamiliar safes, it is necessary to have good drills and optical instruments. If you plan to make safecracking a lifelong occupation, be advised that good tools are a necessity, and make opening safes much, much easier.

Continued on page 90

Continued from page 88

Q: I would like to know where I could get key blanks to fit the old locks. "Russwin, 1890 REO USA" is printed on the lock case.

These two locks are in excellent condition. I have had problems with old locks for several months now. If you have any information please let me know.

Doug Vogel
Michigan

A: Yes, Doug, you and the rest of us have problems with old locks now and again, but they are interesting to work on and can bring in a few extra bucks if you are inclined to work on them.

If you will look closely at the REO which you mention you will see that the letters are somewhat encircled with a "C". This was the logo for the Russell and Erwin Co. in the late 1800's, which became the Russwin Co. by combining the two names. Your photo is a bit fuzzy and although you show the interior mechanism you have not given me a view of the cylinder or the keyway, nor do you mention the method of securing the cylinder.

I believe that this is a wafer type cylinder that does not screw into the case but is held in place by a set screw. If you will be so kind as to send additional information on the cylinder, pin or wafer, diameter, length, how secured, etc. I will be happy to do some further research for you. At this point I will go for a Keil #76 or #77 if it is flat keyway or a Keil #79 if it is corrugated keyway.

Thanks for writing and letting our readers see some of the work that was done by Russell and Erwin.

Q: I would like to know if you could give me any information on a pushbutton combination lock made by Edwards Mfg. A customer brought it in to my shop and it seems

to be in very good condition. I would like to be able to open it and give him the combination.

I checked in some old padlock books I got from my Father, but I couldn't find anything. Also could you suggest a price for this?

Paul Frederick
Pennsylvania

A: Paul, this piece was first patented and manufactured by the Edwards Manufacturing Co. in Cincinnati, OH. with the same patent dates as shown on your lock. This lock was also manufactured by the Berkman Manufacturing Co. and there are some out there from American Keyless, Chicago, with later patent dates. We find no connection between the Edwards Co. of Cincinnati and the O.M. Edwards Co. of Syracuse, NY who also manufactured padlocks in the early part of this century.

This padlock is not a rarity in the collectors market and doesn't demand a very high price unless one is found in like new condition. \$10 and \$15 is about the average price at padlock collector shows. The combination consists of three numbers which are pressed from the front or back of the piece and referred to as up and down such as 7 and 8 up, 5 down. This would mean 7 and 8 are pressed from the back and 5 from the front. Or, two numbers may be pressed from the front (down) and one from the back, (up).

There are more than 40,000 possible combinations and a computer generated listing would be of great help in keeping track of the numbers tried. Opening can be a real chore and can take some time but it is always worth the effort (for me) to see a shackle fly open. I usually try combinations, or pick difficult locks, when doing something else, like watching TV, fishing, etc.

The "Keyless" can be rapped open, but I don't recommend this method due to the possibility of damaging the very thin brass case.

When you are successful in getting the shackle open, look in the shackle hole and you will see a flat plate or band. Put the point of a pick, or similar tool, alongside this band towards the back of the lock, pry up and move the band towards the front of the case. This releases all of the buttons so that they may be turned to set or remove a number from the combination. To remove a number turn the button to the right as far as it will go. A button which has been set for down will turn to the right about two thirds of a turn. If set for up it will turn about one third of a turn.

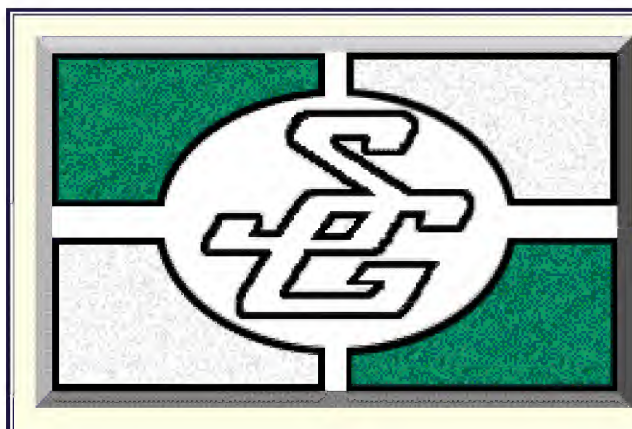
After turning the button, close the shackle. This takes the number out of the combo. Do not try to remove more than one at a time. When all numbers have been removed the shackle will not lock. To set a new combo, buttons are turned left; one third turn for an up number and two thirds for a down number. After each number is set, close the shackle. Do not try to set more than one number at a time. After all the new numbers are entered you check your work for accuracy, move the band or plate in the shackle hole back to its original position to lock the new combo in place.

Good luck on finding the opening numbers, Paul, and thanks for writing to Shop Talk.

Q: A customer of mine has a gas station. In the large roll up bay door is a small aluminum narrow style door. It had the lever set shown in illustration three which broke. It also has a narrow style latch set for locking purposes.

They took the lever set out and

Continued on page 92



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Continued from page 90

lost the latch. The lever set has no lock but holds the door closed during operating hours, and allows them to walk in and out without opening the big bay door. It has a 1 3/4" backset and a 1 1/4" mounting hole. The darkened area in the drawing has a coil spring going around inside for centering the levers. The square cam just slides in and out.

No one seems to have any idea who made it or where I can get another. Can you help me with this?

Norman D. Chance
Pennsylvania

A: Norm, I would think that the best place to start looking for a lock of this type would be an industrial hardware supply house or distributor in your area. These people have locks, handles, hinges, hooks, etc. for even the most unusual applications. My guess is that your lock was made by the A.L. Hansen Manufacturing Co., or by the Eberhard Manufacturing Co. You might try to find a distributor or manufacturer name on the overhead door. This could lead you to a supplier.

I recently needed to replace a broken spring on a tool crib lock, and there was no name on the lock.

The crib was made of wire mesh and in a remote corner I found the name of a fence company. Three phone calls, first to the fence company, second to their supplier, (and industrial hardware supply house) and third to the manufacturer, had replacement springs on the way the same day.

Locksmithing often requires a bit of detective work which may take some time, but, you should get paid for that time. Look around, you will find the answer and thanks for writing.

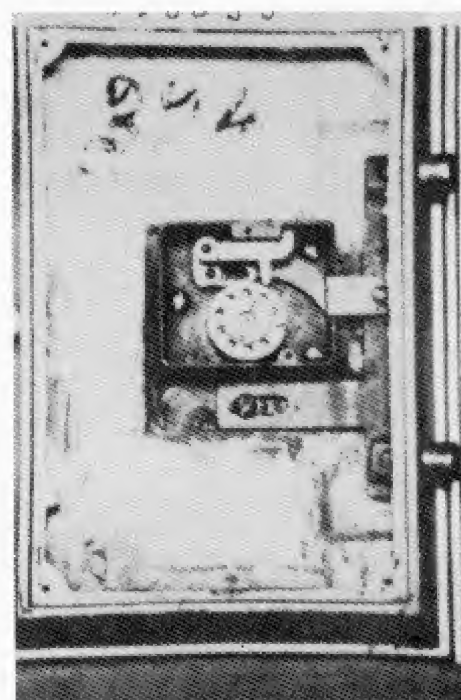
Q: My husband and I recently opened our locksmithing business in Colorado. We have been good success, and we feel good about that. Recently, however, a man called me about an old safe he had purchased about ten years ago.

He does not have the combination, and as far as anyone knows, the safe has not been opened for 30 to 40 years. The safe is an old Victor safe, and the dial has "ears" sticking off of it. There is no handle.

The safe is in beautiful condition, with an old painting on it, and we would like to open it for the customer. I turned the dial and it operates very smoothly. Thanks for any help you can give me.

Carol Ryszkowski
Colorado

A: Your safe is an old Victor cast iron fire safe, made by the Victor



2. ...found in *The National Locksmith's Guide to Safe Opening, Volume One.*

Safe Company of Cincinnati, Ohio. This safe is one of many featured in Dave McOmie's book, *The National Locksmith Guide to Safe Opening, Volume One.* (See photographs 1 and 2.)

The lock is a Victor L2 which was made by Yale, with the driver in back. The characteristic feature is that handle with the ears on it to help when retracting or throwing the bolts. As you noted, there is no handle. These locks came both with and without cases.

The drill point is 93 x 1-1/16". The drop point is 93 or 94. And there is no relocker in this safe. You should find that owning the proper safe manuals makes these openings a breeze.

Q: I was recently called out to open a 1991 Pontiac Grand Am. The keys were locked in the ignition and the spare keys were locked in the car. I do not have any information on the 1991 Grand Am, so I used a horizontal tool for about 45 minutes. The slides on both doors showed they were unlocked.

I only worked on the passenger door, but the driver's door unlocked. I would appreciate some information on opening the 1991 Pontiac Grand Am.

Louis Taylor
Louisiana

A: The 1991 Pontiac Grand Am is similar to many of the newer General Motor cars out there. I found it

Continued on page 94

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1. Victor cast iron fire safe...

Continued from page 92

interesting that you said you only worked on the passenger door and the driver's door unlocked. It made me feel that you weren't familiar with power locks.

Almost all of the newer cars have power locks and all of them react from the driver's door; most will at least partially react from the passenger's door. This makes the driver's door the ideal place to work, if you've elected to open the car from inside the door itself. Should you plan to open the door, by-passing the inner door (the space between the inside panel and the outside skin) and going for the locking mechanisms inside the car, which door you go to becomes unimportant.

I suggest you use a tool to go under the glass which then passes into the car. This method is required for the Beretta, but do expand its usage to other cars, especially higher priced General Motor cars.

The HPC number for the tool you want is CO-60, although other companies also sell similar tools. (See illustration 3.)

Start out placing two wedges into the door between the glass and the door. One should be just ahead of the inside slide lock and the other

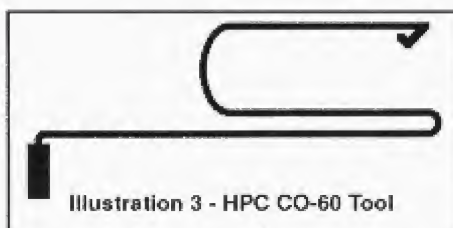


Illustration 3 - HPC CO-60 Tool

should be just behind the inside slide lock. Leave enough space between the two wedges to comfortably insert the tool down into the door. When the tool is deep enough into the door to clear the bottom of the glass, remove the two wedges. This will relax the glass enough to easily pull the tool up and out the other side of the glass. While the tool is down into the door you want to turn it a little and raise some, just enough to lip the bottom of the glass before removing the wedges.

Turn the tool so that it's pointed toward the inside of the car, bring it down over the window sill and place the tip behind the button. I found that at this point if you work the outside portion forward to where it is sitting just ahead of the inside portion all you have to do is rotate the handle slightly to move the button.

Q: I would appreciate any available information on the successors to the Eagle Lock Corporation, which was in Terryville, CT. More specifically, I am trying to find a source for keys and blanks in nickel silver, for the Bell locks, which were manufactured by this company. Any help will be welcomed. Thank you for your attention.

William Cooper
New Jersey

A: I researched your question and find that the Bell locking system was invented by Edward Bennett in about 1918, first patented Jan. 13, 1920, and manufactured originally by the Automatic Instrument Corp. Dudley Lock, of Chicago manufactured the Bell lock for a time, and Eagle picked up the patents in about 1938. The continued manufacture under the name Bell Automatic and later Eagle Bell Lock. The patent was carried over by the Lorr Corporation, when Eagle ended its manufacturing in 1976 (1854-1976). The cam locks were available from Lorr, per a 1986 catalog, in two cylinder lengths and a number of cam configurations. The

keys were also available, blank or cut to code (AS series only.) I checked a Bell lock, in the shop, and find that the original keys were brass, and not nickel silver as you request. I believe that Lorr will continue to make these locks available to OEM accounts only. Keys and blanks will be found in a number of the larger shops around the country, as the locks were used on lockers, cash registers, slot machines, vending machine, and real estate lockout boxes. I'm sure that a number of lock shops could be convinced to part with some of their Bell locks and keys. We still have a half box of the bell keys that are in a Kell box. They are not a fast moving item. Run a "want to buy" Classified ad in this magazine for a few months, with some kind of offer, and a specific request. Good luck.

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Letters

Continued from page 8

requested information I will accumulate the data and make contact with the legal authorities. I, of course, cannot guarantee any results, but the effort will at least mean that we have tried to seek justice.

The ethical base of our profession is based on the best service for fair wage. With a "locksmith service" contracting for that best service, but not paying the wage, they have ignored the ethics of our profession. One soon wonders if the service to their customers also suffers the same fate in administration of their contracts.

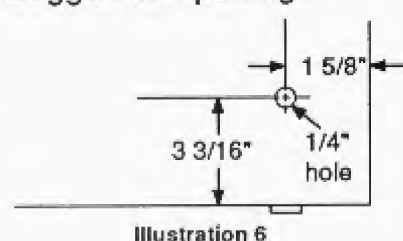
Send the requested information to: Michiana Lock Security, Inc., 217 Overhill Tr., Michigan City, IN 46360.

Dean Wilson
Indiana

Technitips

Continued from page 18

Fire King Lateral File suggested opening



first remove the top of the cabinet. There are six screws across the back, which must be removed to free the top. Remove the top and set it aside carefully. The fire-proofing material is now exposed on top of the cabinet. Measure 1-5/8" in from the right side of the cabinet, and 3-3/16" back from the front. This is the location of the vertical locking bar that must be driven "down" to release the drawers. Drill a 1/4" hole through the fire-proofing material, and into the void which encloses the vertical locking bar. Use a 1/4" rod and hammer to force the locking rod down enough to release the drawers.

Repair should be no more than replacing a small retaining pin, which supports the locking rod. Patch the fire-proofing with plaster of paris or fire-proofing plaster and carefully replace the top of the cabinet.

George Meyer
California

Lexus

Continued from page 41

When the key did not turn, it indicated that the previous cut was the correct one. Again, we listed this cut on the chart. (See illustration 21.)

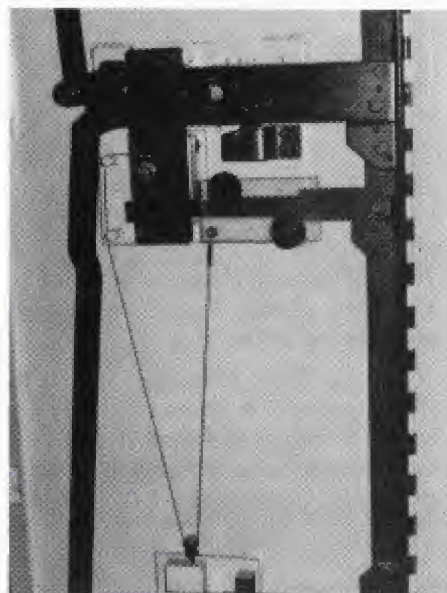
The final cut was the 1 right. For this cut we prepared a new and final key. Using a good Lexus key blank, we made all the cuts indicated on our chart, on both sides of the blank, except for the 1 right. The 1 right position was left as shallow as possible. This was then cut one drop at a time until the key turned. This cut was recorded, and the key was complete. §

Banker's Safe

Continued from page 8

Slick, huh? For that handy little trick we give thanks to my good friend, everybody's favorite manipulator, Skip Eckert. Thanks Skip.

Photograph 16 shows us the area from the keylock down to the lower relocker. Once again, the cable that controls the relocker is attached to two glass plates—one under the lock, the other under the boltbar next to the lock.



16. The keybox to the lower relocker.

One last thing about drilling: The 6-1/4" measurement that Arnie and I used worked, but was not optimum. A measurement of 5-7/8" back from the face of the door will work nicely on Tann Banker's Cash safes, whether with or without glass. This is a nice compromise between the two, and will yield a nicely placed hole in either model.

Well that about wraps it up for this month. Remember, if you need help with a high-security opening. Have

Continued on next page

Drill Will Travel...still first class, but since I started drinking coffee again, I need the aisle seat! See ya next month. §

Car Opening

Continued from page 67

In photograph 10, you can just see the edge of the vertical rod as indicated by the arrow. It is visible against the notched end of the tool on the left. Slide over against this vertical rod and pull upward. The tool will grab the rod as you pull



10. Arrow indicates vertical rod.



11. This photo illustrates proper positioning of the tool.

upward. This unlocks the car. Photograph 11 illustrates the location of the vertical rod and shows how the bowed tool catches it. §

Opening A Shop

Continued from page 70

lucrative part of our business.

Consider this. There are very few people who know that we can create a key from a code number! The term, "keys by code" on your business card or in your other advertising means absolutely nothing to 95 percent of the public and is a waste of space in your ad. You develop code work by doing. When your customers learn that you have this capability they will give you repeat business.

Just observe the reaction of the next customer for whom you create a key by code. "Amazing," "I'm

impressed." "I didn't know you could do that," are very typical responses and you should profit from your customers' new found knowledge.

We have already discussed hand tools and the fact that you should buy the very best and buy enough of them. As with your vehicle, having the same size screw driver in each of your tool kits or work areas is not wasting money, it is saving time. And, most important, put them back where they belong.

Paging through a distributor's catalogue of locksmith tools is almost like being in a fantasy land. There are specialty tools for almost every conceivable job or function that you may be required to do.

As your business grows and you develop regular accounts you will find just what type of equipment, tools, code books, etc. are going to be cost effective and profit producing for you. Make your tool purchases carefully. It is your money that you are spending and we are here to make money. Of course, tools do make you money. §

The Lighter Side

Continued from page 85

from A-I Lock & Key."?

Ignoring him, I allowed my creative mind to pursue other prospects. "You know, this concept has all kinds of possibilities. We could encourage everyone to wear little locks and keys on chains around their necks or as earrings or lapel pins. I can see potential for a whole new branch of the industry, there."

"A parade!" Don said excitedly. "We'd have to have a parade, with floats, and bands, and huge balloons. We could even crown a beauty queen Miss New Key of the Year."

We each drifted off in silence, individually contemplating various aspects of the idea. Suddenly, I was brought back to reality.

"There's just one problem," I said.

"What's that?"

"It's unlikely that locksmiths across the country would participate. Most of them around here don't even show up for the annual association party. Can you imagine the problems that would be involved in trying to organize nationwide participation in a vacation weekend walkout?"

"I don't see the problem," said Don. "All you'd have to do would be send out notices to all locksmiths that on the decided-upon weekend someone from their local association would be coming by to sign them up to serve on a committee. They'd disappear so fast, they'd make Houdini look like the tortoise." §

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